2022 no. 131

**AFKONDIGINGSBLAD
VAN
ARUBA**

MINISTERIËLE REGELING van 23 september 2022 ter uitvoering van artikel 25, derde lid, onderdelen a en b, artikel 26, vijfde lid, artikel 27, eerste en vijfde lid en artikel 28 van het Landsbesluit bewijzen van bevoegdheid voor het luchtvaartpersoneel (AB 2019 no. 34) (Regeling bewijzen van bevoegdheid luchtverkeersleiders)

Uitgegeven, 4 oktober 2022

De minister van Algemene Zaken,
Innovatie, Overheidsorganisatie,
Infrastructuur en Ruimtelijke Ordening a.i.
U.M. Arends

DE MINISTER VAN TRANSPORT, INTEGRITEIT,
NATUUR EN OUDERENZAKEN,

In overweging genomen hebbende:

- dat het van belang is dat het luchtvaartpersoneel voldoet aan de internationale bekwaamheidseisen zodat Aruba een hoog niveau van veiligheid in de burgerluchtvaart in stand kan houden;
- dat het daarom wenselijk is regels vast te stellen ten aanzien van de bewijzen van bevoegdheid van luchtverkeersleiders en assistent-luchtverkeersleiders;

Gelet op:

de artikelen 25, derde lid, onderdelen a en b, 26, vijfde lid, 27, eerste en vijfde lid, en 28 van het Landsbesluit bewijzen van bevoegdheid voor het luchtvaartpersoneel (AB 2019 no. 34);

HEEFT BESLOTEN:

§ 1. Algemene bepalingen

Artikel 1

1. In deze ministeriële regeling wordt verstaan onder:

AUA-ATCO	:	de in bijlage A opgenomen voorschriften en vereisten met betrekking tot: I. afgifte en verlening van bewijzen van bevoegdheid en bevoegdverklaringen voor assistent-luchtverkeersleiders

en luchtverkeersleiders en hun verplichtingen;
II. opleidingsvereisten voor luchtverkeersleiders; en
III. erkenning van opleidingsinstellingen voor luchtverkeersleiders;

Beatrix Control Zone : het luchtruim boven het grondgebied van Aruba tot een hoogte van 6500 voet en het gedeelte van het luchtruim boven de volle zee, waarin Aruba, krachtens het door de Raad van de Internationale Burgerluchtvaartorganisatie goedgekeurde Caribisch regionaal plan, de verantwoordelijkheid heeft aanvaard voor het verzorgen van de luchtverkeersdienstverlening binnen het vluchtinformatiegebied Curaçao;

luchtverkeersdienstverlening : dienstverlening aan het luchtverkeer door middel van luchtverkeersleiding, vluchtinformatie-verstrekking en alarmering;

2. Luchtverkeersdienstverlening in de Beatrix Control Zone wordt alleen verleend door luchtverkeersleiders die gekwalificeerd zijn en houder zijn van een geldig bewijs van bevoegdheid voor luchtverkeersleiders.
3. Bij het verlenen van luchtverkeerdienstverlening dient de houder zijn geldig bewijs van bevoegdheid en zijn medische verklaring bij zich te hebben.

§ 2. Bewijzen van bevoegdheid en vanwaardeverklaring voor assistent-luchtverkeersleiders en luchtverkeersleiders

Artikel 2

1. De aanvraag voor afgifte en verlenging van een bewijs van bevoegdheid of vanwaardeverklaring voor luchtverkeersleiders en assistent-luchtverkeersleiders en de daarop aan te geven bevoegdverklaringen, wordt gedaan op een aanvraagformulier. Het model voor deze aanvraagformulier is opgenomen in bijlage B.
2. Het aanvraagformulier wordt bij de Directie Luchtvaart ingediend.
3. Het model van het bewijs van bevoegdheid voor luchtverkeersleider en assistent-luchtverkeersleider is opgenomen in bijlage C.
4. Het bewijs van bevoegdheid en vanwaardeverklaring blijft bij degene aan wie zij is afgegeven, tenzij de Minister het bewijs van bevoegdheid of vanwaardeverklaring intrekt. De houder ondertekent het bewijs van bevoegdheid of vanwaardeverklaring bij afgifte.
5. De behandeling van een aanvraag duurt minimaal 5 werkdagen.
6. De ingangsdatum van een bewijs van bevoegdheid of vanwaardeverklaring is gelijk aan de datum van afgifte.
7. Een aanvraag voor verlenging wordt tenminste 10 werkdagen voor de vervaldatum ingediend. De ingangsdatum van de verlenging is gelijk aan de vervaldatum van het vorige bewijs van bevoegdheid.
8. Indien de aanvraag na de vervaldatum wordt ingediend, is de ingangsdatum gelijk aan de datum van afgifte.

Artikel 3

1. Een verzoek voor een bewijs van bevoegdheid of vanwaardeverklaring voor luchtverkeersleiders en assistent-luchtverkeersleiders wordt afgewezen, indien de verzoeker niet voldoet aan de voorwaarden en vereisten zoals vastgesteld in de AUA-ATCO.

2. Onverminderd het eerste lid wordt een verzoek voor een bewijs van bevoegdheid of vanwaardeverklaring afgewezen, indien:
   a. een administratief of strafrechtelijk onderzoek gaande is inzake de mogelijke overtreding van luchtvaartvoorschriften door de aanvrager,
   b. het bewijs van bevoegdheid of vanwaardeverklaring van de aanvrager geschorst is,
   c. het verzoek binnen een periode van tien jaar na de datum van intrekking van het bewijs van bevoegdheid van de aanvrager is ingediend, of
   d. zulks noodzakelijk is in het belang van de vliegveiligheid.

Artikel 4

1. Een bewijs van bevoegdheid voor luchtverkeersleiders die overeenkomstig de voorschriften van Bijlage 1 bij het Verdrag van Chicago is afgegeven door een ICAO-verdragsluitende staat, kan worden gevalideerd als een vanwaardeverklaring voor gebruik in de Beatrix Control Zone.
2. De afgifte van de vanwaardeverklaring kan beperkt worden tot specifieke bevoegdheden en voor een bepaalde periode.
3. De geldigheid van de vanwaardeverklaring gaat niet verder dan de geldigheidsduur van het bewijs waarop het is afgegeven.
4. De uitoefening van de bij de vanwaardeverklaring verleende bevoegdheid is afhankelijk van de in de AUA-ATCO vastgestelde eisen en de medische verklaring.
5. De aanvraag voor een vanwaardeverklaring wordt gedaan op de in artikel 2, eerste lid, bedoelde aanvraagformulier en wordt ingediend bij de Directie Luchtvaart Aruba.
6. Het model van het bewijs van vanwaardeverklaring en de daarop aan te geven bevoegdverklaringen voor luchtverkeersleider is opgenomen in bijlage D.

§ 3. Opleidingsinstellingen

Artikel 5

1. Aanvragen voor erkenning als opleidingsinstelling worden ingediend bij de Directie Luchtvaart.
2. De Directie Luchtvaart controleert of de opleidingsinstelling aan de opleidingsvereisten zoals opgenomen in de AUA-ATCO voldoet en of de opleidingsinstelling over voldoende personeel en faciliteiten beschikt.
3. Een opleidingsinstelling stelt de Directie Luchtvaart in kennis van de methodologie die zij gebruikt ten behoeve van de inhoud, organisatie en duur van de opleiding en, indien van toepassing, van de opleidingsplannen en bekwaamhedenprogramma's.

Artikel 6

1. Een erkenning als een opleidingsinstelling geschiedt door middel van een certificaat van erkenning.
2. Een certificaat van erkenning is drie jaar geldig en kan steeds worden verlengd met een zelfde tijdsduur, indien de opleidingsinstelling voldoet aan de eisen van de AUA-ATCO.
3. Een certificaat van erkenning kan worden gewijzigd of ingetrokken, indien de opleiding niet meer aan de eisen opgenomen in de AUA-ATCO voldoet.

§ 4. Ontheffing

Artikel 7

1. De Minister kan op verzoek schriftelijk ontheffing verlenen van specifieke bepalingen van deze ministeriële regeling en van de voorschriften opgenomen in de AUA-ATCO.

2. Het verzoek gaat vergezeld van een gedetailleerde beschrijving van de uitgevoerde luchtvaartactiviteiten-studie en de alternatieve maatregelen, waarmee een veiligheidsniveau gelijk aan het niveau dat is vastgesteld in de desbetreffende bepaling of het desbetreffend voorschrift, gegarandeerd kan worden.
3. Een ontheffing wordt uitsluitend verleend, indien de Minister heeft vastgesteld dat de maatregelen, bedoeld in het tweede lid, voldoende zijn.
4. Een ontheffing wordt verleend onder het stellen van voorschriften en beperkingen voor een bepaalde periode.

§ 5. Slotbepaling

Artikel 8

1. Deze ministeriële regeling treedt in werking met ingang van de dag na die van haar plaatsing in het Afkondigingsblad van Aruba.
2. Zij kan worden aangehaald als Regeling bewijzen van bevoegdheid luchtverkeersleiders.

U.M. Arends

BIJLAGEN

Bijlage A: AUA-ATCO
Bijlage B: Model van het aanvraagformulier
Bijlage C: Model van het bewijs van bevoegdheid
Bijlage D: Model van het bewijs van vanwaardeverklaring

BIJLAGE A

AUA-ATCO

AIR TRAFFIC CONTROLLERS
LICENSING REGULATIONS

FOREWORD

(a) The Minister in charge of aviation affairs, through the Department of Civil Aviation of Aruba, is known in these regulations as the “Authority”

(b) AUA-ATCO addresses the requirements for the licensing and validation of assistant air traffic controllers and of air traffic controllers.

(c) The Authority has adopted associated Acceptable means of compliance or Guidance material wherever possible and, unless specifically stated otherwise, clarification will be based on this material or other internationally acceptable documentation.

(d) The editing practices used in this document are as follows:

(1) ‘Shall’ is used to indicate a mandatory requirement.

(2) ‘Should’ is used to indicate a recommendation.

(3) ‘May’ is used to indicate discretion by the medical assessor of the Competent Authority, the industry, or the applicant, as appropriate.

(4) ‘Will’ indicates a mandatory requirement.

Note: The use of the male gender implies the female gender and vice versa.

REVISION HISTORY

Amendments/revision of this regulation are recorded below in order of the most recent first

REVISION NO.	EFFECTIVE DATE	AMENDED OR REVISED PROVISIONS
Initial Issue	2022	N/A

Contents

SUBPART A — GENERAL REQUIREMENTS

ATCO.A.001 Scope

AUA-ATCO, establishes the requirements for the issue, revocation and suspension of assistant air traffic controller licenses and air traffic controller licenses, their associated ratings and the conditions of their validity and use.

ATCO.A.015 Exercise of the privileges of licenses and provisional inability

(a) The exercise of the privileges granted by a license shall be dependent on the validity of the ratings and of the medical certificate

(b) License holders shall not exercise the privileges of their license when having doubts of being able to safely exercise the privileges of the license and shall in such cases immediately notify the air navigation service provider of the provisional inability to exercise the privileges of their license.

(c) The air navigation service providers may declare the provisional inability of the license holder if they become aware of any doubt concerning the ability of the license holder to safely exercise the privileges of the license.

(d) The air navigation service providers shall develop and implement objective, transparent and non-discriminatory procedures to enable license holders declaring provisional inability to exercise the privileges of their license in accordance with point (b), to declare the provisional inability of the license holder in accordance with point (c), to manage the operational impact of provisional inability cases and to inform the Department of Civil Aviation of Aruba, within 48 hours, as defined in that procedure.

(e) The procedures referred to in point (d) shall be included in the competence scheme according to ATCO.B.025(a)(10).

GM1 ATCO.A.015(b) Exercise of the privileges of licences and provisional inability

GROUNDS FOR PROVISIONAL INABILITY

Examples of grounds for doubting the ability to safely exercise the privileges of the licence may be that the licence holder is:

a) under the influence of psychoactive substances;

b) unfit to perform the duties due to injury, fatigue, sickness, stress, including critical incident stress or other similar causes;
c) not meeting all the competence-related requirements set out in the competence scheme.

GM1 ATCO.A.015(c) Exercise of the privileges of licences and provisional inability

In case of doubt about the medical condition of the air traffic controller, the provisions of AUA-ATCO.MED.A.020 (Decrease in medical fitness) should apply.

GM1 ATCO.A.015(d) Exercise of the privileges of licences and provisional inability

PROCEDURES

The procedures developed and implemented to enable licence holders declaring provisional inability to exercise the privileges of their licence, to manage the operational impact of provisional inability cases and to inform the competent authority should include but are not limited to:

(a) the processes to declare and terminate provisional inability;
(b) an indicative list of cases when the competent authority shall be informed of the declaration or termination of the provisional inability;
(c) the processes to inform the competent authority; and
(d) the mitigating measures to be implemented to ensure sufficient capacity and the continuity of the service.

ATCO.A.020 Revocation and suspension of licenses and ratings

a) Licenses and ratings may be suspended or revoked by the Minister when the license holder does not comply with the requirements of Part-ATCO.

b) When the license holder has his/her license suspended or revoked, he/she shall immediately return the license to the Department of Civil Aviation of Aruba.

c) With the issue of the air traffic controller license the Assistant air traffic controller license is revoked and shall be returned to the Department of Civil Aviation of Aruba.

GM1 ATCO.A.020 Revocation and suspension of licenses and ratings

In the event of suspension of the one or more ratings, the authority will provide an adapted license, if applicable.

If a licence, validation, or rating is suspended, the Authority may determine that the holder shall undergo examination as indicated by the Authority. This will include, among other, the attendance and successful

completion of remedial training, with examination provided by an approved training organization and signing off by an approved assessor of an approved training organization. Furthermore, the holder will be subject to a psychological assessment. The suspension is lifted only upon successful completion all requirements.

SUBPART B — LICENCES AND RATINGS

ATCO.B.001 Assistant air traffic controller license

(a) Holders of an Assistant air traffic controller license shall be authorized to provide air traffic control services in accordance with the rating(s) contained in their license under the supervision of an on-the-job training instructor.

(b) Applicants for the issue of an Assistant air traffic controller license shall:

(1) be at least 20 years old;

(2) have successfully completed the basic training as set in Appendix 1 and a rating training for Tower and Approach Control Procedural as set in Appendix 2 by successfully passing the appropriate examinations and assessments at a training organization satisfying the requirements laid down in Subpart E;

(3) hold a valid medical certificate;

(4) meets the requirements for English language proficiency in accordance with Annex 1 of the Chicago Convention on the ability to master the English language at levels 4, 5 or 6;

(5) has a positive psychological assessment, no older than twenty-four months from the day of application, which has been issued by a psychologist or a psychological institution appointed by the Minister to perform the psychological assessment.

(c) The Assistant air traffic controller license shall contain the language proficiency level and the rating TWR and APP.

(d) The holder of an Assistant air traffic controller license who has not started exercising the privileges of that license within one year from the date of its issue or has interrupted exercising those privileges for a period of more than one year may only start or continue training in that rating after an assessment of his/her previous competence, conducted by a training organization satisfying the requirements laid down in Subpart E and certified to provide training relevant to the rating, as to whether he/she continues to satisfy the requirements relevant to that rating, and after satisfying any training requirements resulting from this assessment.

GM1 ATCO.B.001(b) Assistant air traffic controller licence

MATURITY OF AIR TRAFFIC CONTROLLERS

Persons who wish to undertake air traffic controller training at a training organisation satisfying the requirements laid down in Subpart E should be educationally, physically and mentally sufficiently mature.
In order to assess their ability to complete air traffic controller training, training organisations or air navigation services employing them may conduct aptitude assessments and/or set out educational or similar requirements which could serve as a prerequisite for commencing air traffic controller training.

AMC1 ATCO.B.001(d) Assistant air traffic controller licence

ASSESSMENT OF PREVIOUS COMPETENCE

When establishing previous competence in a rating, the assessment should be based on the requirements set out in Appendix 1 and Appendix 2.

ATCO.B.005 Air traffic controller license

(a) Holders of an air traffic controller license shall be authorized to provide air traffic control services in accordance with the ratings of their license, and to exercise the privileges contained therein.

(b) The privileges of an air traffic controller license shall include the privileges of an Assistant air traffic controller license as set out in ATCO.B.001(a).

(c) Applicants for the first issue of an air traffic controller license shall:

(1) be at least 21 years old;

(2) hold an Assistant air traffic controller license with the rating TWR and APP;

(3) hold a valid medical certificate;

(4) meets the requirements for language proficiency in accordance with Annex 1 of the Chicago Convention on the ability to master the English language at levels 4, 5 or 6;

(5) successfully passed the practical assessment by the Department of Civil Aviation.

(6) has a positive psychological assessment, no older than five years from the day of application, which has been issued by a psychologist or a psychological institution appointed by the Minister to perform the psychological assessment.

(d) The air traffic controller license shall be validated by the inclusion of TWR and APP or more ratings and language proficiency level for which the training was successful.

ATCO.B.010 Air traffic controller ratings

(a) Licenses shall contain TWR/APP or more ratings in order to indicate the type of service which the license holder is authorized to provide:

(1) The TWR/APP rating indicating that the license holder is competent to provide an air traffic control service to aerodrome traffic at an aerodrome (TWR) and is also competent to provide an air traffic control service to arriving, departing or transiting aircraft without the use of surveillance equipment (APP);

(2) the Approach Control Surveillance (APS) rating, indicating that the license holder is competent to provide an air traffic control service to arriving, departing or transiting aircraft with the use of ATS surveillance equipment.

(b) Applicants for a first issue of the rating TWR/APP shall:

(1) meet the requirements referred to ATCO.B.005 (c);

(2) have completed the training as required in Subpart D, specifically basic training as required in and Appendix 1 and the rating training for TWR and APP rating as set out in Appendix 2 by successfully passing the appropriate examinations and assessments, at a training organization satisfying the requirements laid down in Subpart E;

(3) for a period of not less than 90 hours or three months, whichever is longer, has provided air traffic control to air traffic and aerodrome traffic without the use of surveillance equipment under the supervision of a practice instructor with an OJT rating for TWR and APP rating;

(4) have successfully passed the practical exam for the TWR and APP rating;

(5) has a positive psychological assessment, no older than five years from the day of application, which has been issued by a psychologist or a psychological institution appointed by the Minister to perform the psychological assessment.

(c) Applicant for a first issue of APS rating must:

(1) meet the requirements referred in ATCO.B.005 (c);

(2) have completed the rating training as required in Subpart D, specifically the rating training APS as set out in Appendix 3 by successfully passing the appropriate examinations and assessments at a training organization satisfying the requirements laid down in Subpart E;

(3) be in possession and exercised the rating of the TWR/APP for a period of at least four years;

(4) for a period of not less than 180 hours or three months from the day of application, whichever is longer, air traffic control provided to approaching, departing and through traffic using a surveillance equipment under the supervision of a practice instructor with an OJT rating for the APS rating;

(5) have successfully passed the practical exam for the APS rating;

(6) has a positive psychological assessment, no older than five years, which has been issued by a psychologist or a psychological institution appointed by the Minister to perform the psychological assessment.

ATCO.B.011 Re-validation of Air traffic controllers ratings

(a) The Air Traffic Controllers rating TWR, APP and APS shall be valid for a period of 6 months.

(b) A rating TWR and APP may be revalidated if:

(1) hold a license as air traffic controller with a valid TWR and APP rating;

(2) have exercised the privilege of a TWR and APP rating for at least 30 hours during the period of validity of the rating as set in (a); and

(3) the holder has a positive psychological assessment, no older than five years from the day of application, which has been issued by a psychologist or a psychological institution appointed by the Minister to perform the psychological assessment.

(c) A rating APS may be revalidated if

(1) hold a license as air traffic controller with a valid TWR, APP and APS rating;

(2) have exercised the privilege of an TWR, APP, APS rating for at least 30 hours during the period of validity of the rating as set in (a); and

(3) the holder has a positive psychological assessment, no older than five years from the day of application, which has been issued by a psychologist or a psychological institution appointed by the Minister to perform the psychological assessment.

(d) In the case the rating holder does not comply with the minimum number of hours for exercising a privilege for the renewal of a rating and does not fall under the situation in (e), the rating can only be renewed if the holder complies with the procedure established according to the requirements contained in the competence scheme ATCO.B.025 (3).

(e) The holder of a rating who has interrupted exercising the privileges associated with that rating for a period of a three years or more preceding consecutive years may only start on-the-job training in that rating after assessment of previous competence, conducted by a training organization or air navigation service provider satisfying the requirements laid down in Subpart E and certified to provide training relevant to the rating, as to whether the person concerned continues to satisfy the conditions of that rating, and after satisfying any training requirements resulting from this assessment. The rating will only be validated after successfully passing the practical exam for that rating.

ATCO.B.025 Rating Competence scheme

(a) A Competence schemes shall be established by the air navigation service provider and approved by the Department of Civil Aviation Aruba. It shall include at least the following elements:

(1) the maximum continuous period when the privileges of a rating are not exercised during its validity. This period shall not exceed 90 calendar days;

(2) the minimum number of hours for exercising the privileges of a rating within a defined period of time, which shall not exceed 6 months for the purpose of ATCO.B.010;

(3) procedures for the cases where the license holder does not meet the requirements set out in point (a) (1) and (2);

(4) processes assessment of the refresher training subjects according to ATCO.D.080 (b);

(5) processes to identify the topics and subtopics, objectives and training methods for continuation training;

(6) procedures for the declaration and the management of cases of provisional inability to exercise the privileges of a license, as well as for informing the Department of Civil Aviation Aruba in accordance with ATCO.A.015 (d);

(7) procedure for tracking the expiration date of the licenses and medical certificates and a process for ensuring that a license holder does not provide air traffic control without being in possession of a valid license when performing their privileges;

(8) identification of records to be kept specific to continuation training and assessments;

(9) process and reasons for reviewing and amending the competence scheme and its submission to the Department of Civil Aviation for approval. The review of the competence scheme shall take place at least once every three years.

(b) In order to comply with the requirement, set out in point (a) (2), air navigation service providers shall keep records of the hours, during which each license holder exercises the privileges of his/her rating in the ATC unit and shall provide that data (competence assessment form) to the license holder when requesting the revalidation of rating(s).

(c) When establishing the procedures referred to in point (a) (3) and (6) air navigation service providers shall ensure that mechanisms are applied to guarantee fair treatment of licence holders where the validity of their rating cannot be extended.

GM1 ATCO.B.025(a)(2) Rating Competence scheme

MINIMUM NUMBER OF HOURS

The minimum number of hours should be defined for each rating, and it should be identical for each rating holder. For licence holders holding more than one rating, the minimum number of hours may be defined as a combined value based on the exercising of the privileges, not less than 30 hours.

GM3 ATCO.B.025(a)(4) Rating competence scheme

ASSESSMENTS OF REFRESHER TRAINING SUBJECTS

(a) Assessments should be conducted primarily on a synthetic training device or offline environments.

(b) Assessments should be conducted by appropriately qualified personnel having detailed knowledge of:
(1) the training objectives; and
(2) the subjects, topics and subtopics being examined or assessed.

ATCO.B.030 Language proficiency

(a) Air traffic controllers and Assistant air traffic controllers shall not exercise the privileges of their licenses unless they have a valid language proficiency in English. The language proficiency shall indicate the language(s), the level(s) of proficiency and the expiry date(s).

(b) The language proficiency level shall be determined in accordance with the rating scale set out in Annex I of the Chicago Convention.

(c) Language proficiency shall be demonstrated by a certificate attesting the result of the assessment.

ATCO.B.035 Validity of language proficiency

(a) The validity of the language proficiency, depending on the level determined in accordance with Annex I of the Chicago Convention. The validity period of the language proficiency for initial issue and renewal shall start on the date on which the language proficiency assessment has been successfully completed.

(b) Language proficiency shall be revalidated following successful completion of the language proficiency assessment taking place within three months immediately preceding their expiry date. In such cases the new validity period shall be counted from that expiry date.

(c) If the language proficiency is revalidated before the period provided for in point (b), its validity period shall start not later than 30 days from the date on which the language proficiency assessment has been successfully completed.

(d) When the validity of a language proficiency expires, the license holder shall successfully complete a language proficiency assessment in order to have his/her language proficiency renewed.

ATCO.B.040 Assessment of language proficiency

(a) The demonstration of language proficiency shall be done through a method of assessment approved by the Department of Civil Aviation Aruba, which shall contain:
   (1) the process by which an assessment is done;
   (2) the qualification of the assessors;

(b) Language assessment bodies shall comply with the requirements established by the Department of Civil Aviation Aruba.

AMC1 ATCO.B.040 Assessment of language proficiency

GENERAL

(a) The language proficiency assessment should be designed to reflect the tasks undertaken by air traffic controllers, but with specific focus on language rather than operational procedures and knowledge.

(b) The assessment should determine the applicant’s ability to communicate effectively using visual and non-visual communication in both routine and non-routine situations.

AMC2 ATCO.B.040 Assessment of language proficiency

ASSESSMENT

(a) The assessment should comprise the following three elements:
 (1) listening — assessment of comprehension;
 (2) speaking — assessment of pronunciation, fluency, structure and vocabulary;
 (3) interaction.

(b) The switch between phraseology and plain language should be assessed for listening and speaking proficiency.

(c) When the assessment is not conducted in a face-to-face situation, it should use appropriate technologies for the assessment of the applicant's abilities in listening and speaking, and for enabling interactions.

(d) In case of revalidation of the language proficiency endorsement, the assessment may be conducted during training activities or on operational position, with prior notification to the air traffic controller to be assessed.

(e) Irrespective of the way the assessment is organised, the requirements listed in (a) and (b) as well as the relevant provisions for language proficiency assessors should be met.

AMC3 ATCO.B.040 Assessment of language proficiency

LANGUAGE PROFICIENCY ASSESSORS

(a) Persons responsible for language proficiency assessment should be suitably trained and qualified.

(b) Language proficiency assessors should undergo regular refresher training on language assessment skills.

(c) Language proficiency assessors should not conduct language proficiency assessments whenever their objectivity may be affected.

AMC4 ATCO.B.040 Assessment of language proficiency

CRITERIA FOR THE ACCEPTABILITY OF LANGUAGE ASSESSMENT BODIES

(a) A language assessment body should provide clear information about its organisation and its relationships with other organisations.

(b) If a language assessment body is also an air traffic controller training organisation, there should be a clear and documented separation between the two activities.

(c) The language assessment body should employ a sufficient number of qualified interlocutors and language proficiency assessors to administer the required tests.

(d) The assessment documentation should include at least the following:
 (1) assessment objectives;

 (2) assessment layout, timescale, technologies used, assessment samples, voice samples;

 (3) assessment criteria and standards (at least for the operational, extended and expert levels of the rating scale in Appendix 1 of Annex 1 of the Chicago Convention;

 (4) documentation demonstrating the assessment validity, relevance and reliability for the operational and extended levels;

 (5) documentation demonstrating the assessment validity, relevance and reliability for the expert level;

 (6) procedures to ensure that language assessments are standardised within the language assessment body and in the ATC community;

 (7) assessment procedures and responsibilities, such as:
  — preparation of individual assessment;
  — administration: location(s), identity check and invigilation, assessment discipline, confidentiality/security;
  — reporting and documentation provided to the competent authority and/or to the applicant, including sample certificate; and
  — retention of documents and records.

 (8) The assessment documentation and records should be kept for a period of five years and made available to the Department of Civil Aviation Aruba.

GM1 ATCO.B.040 Assessment of language proficiency

LANGUAGE PROFICIENCY ASSESSORS

(a) Persons responsible for language proficiency assessment should be either aviation specialists (e.g. current or former air traffic controllers) or language specialists with additional aviation-related training. The preferred approach for an assessment would be to form a team consisting of an operational expert and a language expert.

(b) Language proficiency assessors should be trained in the requirements specific to the language proficiency assessment, and assessment and interlocution techniques.

GM2 ATCO.B.040 Assessment of language proficiency

Further information can be found in the 'Manual on the Implementation of ICAO Language Proficiency Requirements' (ICAO Doc 9835) and the Language Testing Criteria for Global Harmonization (ICAO Cir 318 AN/180).

ATCO.B.045 Language training

(a) Air navigation service providers shall make available language training to maintain the required level of language proficiency of air traffic controllers to:

  (1) holders of language proficiency at operational level (level four or higher);

  (2) licensee holders without the opportunity to apply their skills on a regular basis in order to maintain their language skills.

(b) Language training may also be made available in the form of continuous training.

AMC1 ATCO.B.045 Language training

(a) Language training should contain communication in a job-related context particularly to handle abnormal and emergency situations and conduct non-routine coordination with colleagues, crews and technical staff.

(b) Emphasis should be placed on listening comprehension, speaking interaction and vocabulary building.

GM1 ATCO.B.045 Language training

While it is true that many licence holders regularly have prolonged and extensive opportunities to practise — and so to maintain — their language proficiency, it is also true that a purely routine use of the language through phraseology, standard procedures and limited social contact only maintains a restricted core usage of the language which might be quite inadequate for managing unexpected and abnormal situations.

Research shows that language proficiency erosion (language attrition) occurs rapidly over time; the lower the initial level, the faster the rate of erosion unless systematic strategies and a high degree of motivation counter this trend.

It is very well documented that one's language and communicative proficiency, even in one's native language, deteriorates sharply under stress, therefore, it is recommended that licence holders participate in available language training.

GM2 ATCO.B.045 Language training

Training for language proficiency skills may be delegated to language training organisations with knowledge in the field of aviation.

ATCO.B.050 Occurrence reporting

(a) Assistant air traffic controller license holders and Air Traffic Controller license holders shall report to the Department of Civil Aviation Aruba, any accident, serious incident and occurrence resulting from their training or operational activity.

(b) Reports shall be made as soon as practicable, but in any case, within 72 hours of the license holder identifying the condition to which the report relates, unless exceptional circumstances prevent this. The reports shall be submitted electronically at the email safetymanagement@dca.gov.aw

(c) The licence holder shall report among others:

1. AIRCRAFT-RELATED OCCURRENCES

(1) A collision or a near collision on the ground or in the air, between an aircraft and another aircraft, terrain or obstacle[1], including near-controlled flight into terrain (near CFIT).

(2) Separation minima infringement[2].

(3) Inadequate separation[3].

(4) ACAS/ TCAS RAs.

(5) Wildlife strike including bird strike.

(6) Runway or taxiway excursion.

(7) Actual or potential runway or taxiway incursion.

(8) Final Approach and Take-off Area (FATO) incursion.

(9) Aircraft deviation from ATC clearance.

(10) Aircraft deviation from applicable air traffic management (ATM) regulation:

[1] Obstacle includes vehicle.

[2] This refers to a situation in which prescribed separation minima were not maintained between aircraft or between aircraft and airspace to which separation minima is prescribed.

[3] In the absence of prescribed separation minima, a situation in which aircraft were perceived to pass too close to each other for pilots to ensure safe separation.

(i) aircraft deviation from applicable published ATM procedures;

(ii) airspace infringement including unauthorized penetration of airspace;

(iii) deviation from aircraft ATM-related equipment carriage and operations;

(11) Call sign confusion related occurrences.

(12) Missed approaches

2. DEGRADATION OR TOTAL LOSS OF SERVICES OR FUNCTIONS

(1) Inability to provide ATM services or to execute ATM functions:

(i) inability to provide air traffic services or to execute air traffic services functions;

(ii) inability to provide airspace management services or to execute airspace management functions;

(iii) inability to provide air traffic flow management and capacity services or to execute air traffic flow management and capacity functions.

(2) Missing or significantly incorrect, corrupted, inadequate or misleading information from any support service[4], including relating to poor runway surface conditions.

(3) Failure of communication service.

(4) Failure of surveillance service.

(5) Failure of data processing and distribution function or service.

(6) Failure of navigation service.

(7) Failure of ATM system security which had or could have a direct negative impact on the safe provision of service.

(8) Significant ATS sector/position overload leading to a potential deterioration in service provision.

(9) Incorrect receipt or interpretation of significant communications, including lack of understanding of the language used, when this had or could have a direct negative impact on the safe provision of service.

(10) Prolonged loss of communication with an aircraft or with other ATS unit.

[4] For example: air traffic service (ATS), automatic terminal information service (ATIS), meteorological services, navigation databases, maps, charts, aeronautical information service (AIS), manuals.

3. OTHER OCCURRENCES

(1) Declaration of an emergency (‘Mayday’ or ‘PAN’ call).

(2) Significant external interference with Air Navigation Services (for example radio broadcast stations transmitting in the FM band, interfering with ILS (instrument landing system), VOR (VHF Omni Directional Radio Range) and communication).

(3) Interference with an aircraft, an ATS unit or a radio communication transmission including by firearms, fireworks, flying kites, laser illumination, high-powered lights lasers, Remotely Piloted Aircraft Systems, model aircraft or by similar means.

(4) Fuel dumping.

(5) Bomb threat or hijack.

(6) Fatigue impacting or potentially impacting the ability to perform safely the air navigation or air traffic duties.

(7) Any occurrence where the human performance has directly contributed to or could have contributed to an accident or a serious incident.

(d) The same report must be submitted simultaneously to the Department of Civil Aviation, as the report submitted to the air navigation service provider which employs the licence holder within the same period and method as stated in (b).

SUBPART C —REQUIREMENTS FOR INSTRUCTORS, ASSESSORS AND EXAMINERS

SECTION 1 — INSTRUCTORS

ATCO.C.001 Theoretical instructors

(a) Theoretical training shall only be carried out by appropriately qualified instructors at an Approved Training Organization by the Department of Civil Aviation Aruba.

(b) A theoretical instructor is appropriately qualified if he/she:

(1) holds an air traffic controller license and/or holds a professional qualification appropriate to the subject being taught and/or has demonstrated adequate knowledge and experience to the training organization;

(2) has demonstrated instructional skills to the training organization.

GM1 ATCO.C.001(b)(1) Theoretical instructors

QUALIFICATION OF THEORETICAL INSTRUCTORS

Professional qualification appropriate to the subject should ensure sufficient level of current knowledge, which is relevant to the subject and its application in air traffic control.

AMC1 ATCO.C.001(b)(2) Theoretical instructors

INSTRUCTIONAL SKILLS FOR THEORETICAL INSTRUCTORS

A satisfactory demonstration of instructional skills for theoretical instructors should establish competence at least in the following areas:

(a) lesson objectives are defined and communicated;
(b) subject questions are fully answered;
(c) visual aids are used appropriately;
(d) language is unambiguous;
(e) the lesson is correctly summarised; and
(f) lesson objectives are fulfilled.

ATCO.C.005 Practical instructors

A person shall only carry out practical training when he/she holds an air traffic controller license with an on-the-job training instructor (OJT) rating.

ATCO.C.010 On-the-job training instructor (OJT) privileges

(a) Holders of an OJT rating are authorized to provide practical training and supervision on operational working positions for which a valid rating is held.

(b) Holders of an OJT rating shall only exercise the privileges of the rating if they have:
- (1) exercised for at least five years the privilege of the rating they will instruct in;
- (2) has been fulfilling the function of supervisor for at least five years; and
- (3) demonstrated knowledge and skills of current operational practices in those procedures in which it is intended to provide instruction.

(c) The period of five years referred to in point (b) (1) can be shortened by one year by the Department of Civil Aviation Aruba when requested by an approved training organization or air navigation service provider.

GM1 ATCO.C.010(c) On-the-job training instructor (OJTI) privileges

SHORTENING OF THE RATING EXPERIENCE REQUIREMENT FOR OJTI

When assessing the training organisations or air navigation service provider's request for the shortening of the rating experience requirement for OJTIs, the Department of Civil Aviation Aruba will take into account the complexity of the traffic in the rating where the on-the-job instruction is provided, as well as the impact on the continuity and safety aspects of the service.

An assessment by an approved training organization stating that the applicant has the necessary skills, knowledge and attitudes required to perform as an On-the-Job training instructor in the rating must be submitted with the application.

ATCO.C.015 Application for on-the-job training instructor rating

Applicants for the issue of an OJT rating shall:

(a) hold an air traffic controller license with a valid rating;

(b) have exercised the privileges of an air traffic controller license and the relevant rating for a period of at least five years immediately preceding the application. This period can be shortened by one

year by the Department of Civil Aviation Aruba when requested by the training organization or air navigation service provider; and

(c) within the year preceding the application, have successfully completed a practical instructional techniques course during which the required knowledge and pedagogical skills are taught and have been appropriately assessed.

GM1 ATCO.C.015(b) Application for on-the-job training instructor rating

SHORTENING OF THE LICENCE EXPERIENCE REQUIREMENT FOR OJTI

When assessing the training organisations or air navigation services provider's request for the shortening of the licence experience requirement for OJTs, the Department of Civil Aviation Aruba will take into account the complexity of the traffic where the on-the-job instruction is provided, as well as the impact on the continuity and safety aspects of the service.

An assessment by an approved training organization stating that the applicant has the necessary skills, knowledge and attitudes required to perform as an On-the-Job training instructor in the rating must be submitted with the application.

ATCO.C.020 Validity of on-the-job training instructor rating

(a) The OJT rating shall be valid for a period of 36 months.

(b) The OJT rating may be revalidated by successfully completing refresher training on practical instructional skills during its validity period, provided that the requirements of ATCO.C.015 (a) and (b) are met.

(c) If the OJT rating has expired, it may be renewed by:
  (1) receiving refresher training on practical instructional skills; and
  (2) successfully passing a practical instructor competence assessment by the Department of Civil Aviation Aruba;

  within the year preceding the application for renewal, provided that the requirements of ATCO.C.015 (a) and (b) are met.

(d) In the case of first issue and renewal the period of validity of the OJT rating shall start not later than 30 days from the date on which the assessment has been successfully completed.

GM1 ATCO.C.020(b) Validity of on-the-job training instructor rating

REVALIDATION

(a) Successful completion of the refresher training in practical instructional skills may be verified

demonstration of the practical instructional skills.

(b) The verification should be undertaken following the completion of the refresher training.

SECTION 2 — ASSESSORS

ATCO.C.045 Assessor privileges

(a) A person shall only carry out assessments when he/she holds an assessor rating.

(b) Holders of an assessor rating are authorized to carry out assessments during training for the issue of a new rating;

(c) Holders of an assessor rating shall only exercise the privileges of the rating if they have:
 (1) at least five years' experience in the rating they will assess in;
 (2) have exercised the privileges of OJT-rating for at least five years; and
 (3) demonstrated knowledge of current operational practices.

(d) When assessing for the purpose of issue and renewal of a rating, and for ensuring supervision on the operational working position, the assessor shall also hold a valid OJT rating, or an On-the-Job-Instructor holding a valid OTJ rating associated with the assessment shall be present.

(e) The period of five years referred to in point (c) (1) can be shortened by one year by the Department of Civil Aviation Aruba when requested by an approved training organization or air navigation service provider.

(f) An exemption to the requirement (c) (2) may be granted by the Department of Civil Aviation Aruba under the conditions that the applicant has:
 (1) the OJT-rating for at least 3 years in in the rating they will examinate;
 (2) an assessment by an approved training organization for the rating knowledge and attitudes required to perform an assessment must be submitted with the application.

AMC1 ATCO.C.045(c)(2) Assessor privileges

DEMONSTRATION OF KNOWLEDGE OF CURRENT OPERATIONAL PRACTICES

The demonstration of knowledge of current operational practices may be achieved by establishing familiarity with current environment and operational procedures.

GM1 ATCO.C.045(e) Assessor privileges

SHORTENING OF THE RATING EXPERIENCE REQUIREMENT FOR ASSESSOR

When assessing the training organisations or air navigation service provider's request for the shortening of the rating experience requirement for Assessor, the Department of Civil Aviation Aruba will take into account the complexity of the traffic in the rating where the Assessor will perform, as well as the impact on the continuity and safety aspects of the service.

An assessment by an approved training organization stating that the applicant has the necessary skills, knowledge and attitudes required to perform as an assessor in the rating must be submitted with the application.

ATCO.C.050 Vested interests

Assessors shall not conduct assessments whenever their objectivity may be affected.

ATCO.C.055 Application for assessor rating

Applicants for the issue of an assessor rating shall:

(a) have exercised the privileges of an air traffic controller license and relevant rating for at least five years;

(b) have exercised the privileges of OJT-rating for at least five years; and

(c) within the year preceding the application have successfully completed an assessor course during which the required knowledge and skills are taught using theoretical and practical methods, and have been appropriately assessed.

ATCO.C.060 Validity of assessor rating

(a) The assessor rating shall be valid for a period of 36 months.

(b) The assessor rating may be revalidated by successfully completing refresher training on assessment skills and on current operational practices during its validity period.

(c) If the assessor rating has expired, it may be renewed by:

(1) receiving refresher training on assessment skills and on current operational practices; and

(2) successfully passing an assessor competence assessment by the Department of Civil Aviation Aruba;

within the year preceding the application for renewal.

(d) In the case of first issue and renewal the period of validity of the assessor rating shall start not later than 30 days from the date on which the assessment has been successfully completed.

GM1 ATCO.C.060(b) Validity of assessor rating

REVALIDATION

(a) Successful completion of the refresher training in assessment skills and current operational practices will be verified by demonstration of the practical instructional skills.

(b) Current operational practices may be refreshed by transitional and pre-on-the-job training.

(c) The verification should be undertaken following the completion of the refresher training

SECTION 3 — EXAMINERS

ATCO.C.065 Examiners privileges

(a) A person shall only carry out practical examinations when he/she holds an examiner rating.

(b) Holders of an examiners rating are authorized to carry out examinations:
- (1) for the issue of a new rating,
- (2) of air traffic controllers for the issue of a rating for revalidation and renewal.

(c) Holders of an examiner rating shall only exercise the privileges of the rating if they have:
- (1) at least 5 years' experience in the rating they will examinate in;
- (2) have exercised the rating of assessor for at least 2 years; and
- (3) demonstrated knowledge of current operational practices.

(d) The period of five years referred to in point (c) (1) can be shortened by one year by the Department of Civil Aviation Aruba when requested by an approved training organization or air navigation service provider.

(e) An exemption to the requirement (c) (2) may be granted by the Department of Civil Aviation Aruba under the conditions that the applicant has:
- (1) the OJT-rating for at least 3 years in in the rating they will examinate;
- (2) An assessment by an approved training organization stating that the applicant has the necessary skills, knowledge and attitudes required to perform an examination must be submitted with the application.
- (3) a representative of an approved training organization for the rating, is present during examinations they perform.

(f) In addition to the requirements set out in point (c), holders of an examiners rating shall only exercise the privileges of the examiners when authorized by and under the instructions of the Department of Civil Aviation Aruba.

GM1 ATCO.C.065(d) Examiners privileges

SHORTENING OF THE RATING EXPERIENCE REQUIREMENT FOR EXAMINER

When assessing the training organisations or air navigation service provider's request for the shortening of the rating experience requirement for Examiner, the Department of Civil Aviation Aruba will take into account the complexity of the traffic in the rating where the examination will take place, as well as the impact on the continuity and safety aspects of the service.

An assessment by an approved training organization stating that the applicant has the necessary skills, knowledge and attitudes required to perform as examiner in the rating must be submitted with the application.

GM1 ATCO.C.065(e) Examiners privileges

EXEMPTION OF ASSESSOR RATING REQUIREMENT

When assessing the training organisation's or Air Navigation Services provider's request for an exemption from the rating requirement of the assessor, the Department of Civil Aviation Aruba will grant the organization concerned exemption to only one applicant/holder every 12 months.

An assessment by an approved training organization stating that the applicant has the necessary skills, knowledge and attitudes required to perform as an examiner in the rating must be submitted with the application.

ATCO.C.070 Vested interests

Examiners shall not conduct assessments whenever their objectivity may be affected.

ATCO.C.075 Application for examiners rating

Applicants for the issue of an examiner rating shall:

(a) have exercised the privileges of an air traffic controller license and relevant rating for at least 5 years; and

(b) within the year preceding the application have successfully completed an assessor course during which the required knowledge and skills are taught using theoretical and practical methods, and have been appropriately assessed.

(c) Have exercised the rating of assessor for at least 2 years.
Note. Unless exempted pursuant to ATCO.C.065 (d).

ATCO.C.080 Validity of examiners rating

(a) The examiners rating shall be valid for a period of 36 months.

(b) The examiners rating may be revalidated by successfully completing refresher training on assessment skills and on current operational practices during its validity period.

(c) If the examiner rating has expired, it may be renewed by:
(1) receiving refresher training on assessment skills and on current operational practices; and
(2) successfully passing an assessor competence assessment;
within the year preceding the application for renewal.

SUBPART D — AIR TRAFFIC CONTROLLER TRAINING

SECTION 1 — GENERAL REQUIREMENTS

ATCO.D.001 Objectives of air traffic controller training

Air traffic controller training shall cover the entirety of theoretical courses, practical exercises, including simulation, and on-the-job training required in order to acquire and maintain the skills to deliver safe, orderly and expeditious air traffic control services.

ATCO.D.005 Types of air traffic controller training

(a) Air traffic controller training shall consist of the following types:

(1) Basic training: : theoretical and practical training designed to impart fundamental knowledge and practical skills related to basic operational procedures;

(2) rating training : theoretical and practical training designed to impart knowledge and practical skills related to a specific rating;

(3) continuation training, designed to maintain the validity of the licence, consisting of:

(i) refresher training;

(ii) conversion training, when relevant.

(b) In addition to the types of training referred to in point (a), air traffic controllers may undertake the following types:

(1) practical instructors' training, leading to the issue, revalidation or renewal of an OJT-rating;

(2) assessor training, leading to the issue, revalidation or renewal of an assessor and/or examiner rating;

SECTION 2 — BASIC AND RATING TRAINING REQUIREMENTS

ATCO.D.010 Composition of training

(a) Basic training, intended for an applicant for an Assistant air traffic controller licence or for the first issue of an air traffic control license shall consist of:

(1) all the subjects, topics and subtopics contained in Appendix 1; and

(b) rating training, comprising the subjects, topics and subtopics of the following:

(i) Aerodrome Control Rating for Tower — TWR, and Approach Control Procedural Rating — APP, defined in Appendix 2;

(ii) Approach Control Surveillance Rating — APS, defined in Appendix 3;

(c) Training intended for the reactivation of a rating following a not successful assessment shall be tailored according to the result of that assessment.

(d) Basic and/or rating training may be complemented with subjects, topics and subtopics that are additional or specific to the national environment.

GM1 ATCO.D.010 Composition of initial training

GENERAL

(a) Basic training is common to all applicants for an Assistant Air Traffic Controller licence and for rating training there are two different rating syllabi, namely TWR/APP and APS

(b) For the issue of an assistant air traffic controller licence, an applicant should have concluded Basic training (Appendix 1) and rating syllabi of TWR and APP (Appendix 2)

(c) Rating training may be commenced before the completion of the basic training.

(d) If an applicant already holds a licence, and there is a requirement for training to achieve the additional rating of APS, the applicant should not repeat the basic training objectives; however, there is a requirement to achieve the objectives contained within the relevant rating training plus any additional objectives specific to the local or national environment.

ATCO.D.015 Basic training plan

A basic training plan shall be established by the training organisation and approved by the Department of Civil Aviation Aruba. It shall contain at least:

(a) the composition of the basic training course provided according to Appendix 1;

(b) the structure of the basic training provided according to ATCO.D.020(b);

(c) the process for the conduct of the basic training course(s);

(d) the training methods;

(e) minimum and maximum duration of the basic training course(s);

(f) with regard to ATCO.D.010(b), process for adapting the basic training course(s) to take due account of a successfully completed course;

(g) processes for examinations and assessments according to ATCO.D.025 and ATCO.D.035, as well as performance objectives according to ATCO.D.030 and ATCO.D.040;

(h) training personnel qualifications, roles and responsibilities;

(i) process for early termination of training;

(j) the appeal process;

(k) identification of records to be kept specific to basic training;

(l) process and reasons for reviewing and amending the basic training plan and its submission to the Department of Civil Aviation Aruba. The review of the basic training plan shall take place at least once every three years.

ATCO.D.020 Basic and rating training courses

(a) Basic and rating training shall be provided as separate or integrated courses.

(b) Basic and rating training courses shall be developed and provided by training organisations and approved by the Department of Civil Aviation Aruba.

(c) When basic and rating training is provided as an integrated course, a clear distinction shall be made between the examinations and assessments for:

(1) basic training; and

(2) each rating training.

(d) The successful completion of initial training, or of rating training for the issue of an additional rating, shall be demonstrated by a certificate issued by the training organisation.

(e) The successful completion of basic training and each rating training shall be demonstrated by a certificate issued by the training organisation upon request of the applicant.

ATCO.D.025 Basic training examinations and assessment

(a) Basic training courses shall include theoretical examination(s) and assessment(s).

(b) A pass in theoretical examination(s) shall be awarded to an applicant achieving a minimum of 80 % of the marks allocated to that examination.

(c) Assessment(s) of performance objectives as listed in ATCO.D.030 shall be conducted on a part-task trainer or a simulator.

(d) A pass in assessment(s) shall be awarded to an applicant who consistently demonstrates the required performance as listed in ATCO.D.030 and shows the behaviour required for safe operations within the air traffic control service.

ATCO.D.030 Basic training performance objectives

Assessment(s) shall include evaluation of the following performance objectives:

(a) checking and using the working position equipment;

(b) developing and maintaining situational awareness by monitoring traffic and identifying aircraft when applicable;

(c) monitoring and updating flight data display(s);

(d) maintaining a continuous listening watch on the appropriate frequency;

(e) issuing appropriate clearances, instructions and information to traffic;

(f) using approved phraseology;

(g) communicating effectively;

(h) applying separation;

(i) applying coordination as necessary;

(j) applying the prescribed procedures for the simulated airspace;

(k) detecting potential conflicts between aircraft;

(l) appreciating priority of actions;

(m) choosing appropriate separation methods.

ATCO.D.035 Rating training examinations and assessment

(a) Rating training courses shall include theoretical examination(s) and assessment(s).

(b) A pass in theoretical examination(s) shall be awarded to an applicant achieving a minimum of 80 % of the marks allocated to that examination.

(c) Assessment(s) shall be based on the rating training performance objectives described in ATCO.D.040.

(d) Assessment(s) shall be conducted on a simulator or live operations.

(e) A pass in assessment(s) shall be awarded to an applicant who consistently demonstrates the required performance described in ATCO.D.040 and shows the behaviour required for safe operations within the air traffic control service.

ATCO.D.040 Rating training performance objectives

(a) Rating training performance objectives and performance objective tasks shall be defined for each rating training course.

(b) Rating training performance objectives shall require an applicant to:

(1) demonstrate the ability to manage air traffic in a manner that ensures safe, orderly and expeditious services; and

(2) handle complex and dense traffic situations.

(c) In addition to point (b), rating training performance objectives for the TWR rating shall ensure that applicants:

(1) manage the workload and provide air traffic services within a defined aerodrome area of responsibility; and

(2) apply aerodrome control techniques and operational procedures to aerodrome traffic.

(d) In addition to point (b), rating training performance objectives for the Approach Control Procedural rating shall ensure that applicants:

(1) manage the workload and provide air traffic services within a defined approach control area of responsibility; and

(2) apply procedural approach control, planning techniques and operational procedures to arriving, holding, departing and transiting traffic.

(e) In addition to point (b), rating training performance objectives for the Approach Control Surveillance rating shall ensure that applicants:

(1) manage the workload and provide air traffic services within a defined approach control area of responsibility; and

(2) apply approach surveillance control, planning techniques and operational procedures to arriving, holding, departing and transiting traffic.

SECTION 4 – CONTINUATION TRAINING REQUIREMENTS

ATCO.D.075 Continuation training

Continuation training shall consist of refresher and conversion training courses.

ATCO.D.080 Refresher training

(a) Refresher training course(s) shall be developed and provided by training organisations and/or the air navigation service provider with prior approval of the Department of Civil Aviation Aruba.

(b) Refresher training shall be designed to review, reinforce or enhance the existing knowledge and skills of air traffic controllers to provide a safe, orderly and expeditious flow of air traffic and shall contain at least:

(1) standard practices and procedures training, using approved phraseology and effective communication;

(2) abnormal and emergency situations training, using approved phraseology and effective communication; and

(3) human factors training.

(4) situational awareness training using investigation recommendations of incidents

(c) A syllabus for the refresher training course shall be defined, and where a subject refreshes skills of air traffic controllers, performance objectives shall also be developed.

GM1 ATCO.D.080 Refresher training

REFRESHER TRAINING SUBJECTS

Topics for refresher training subjects may include rarely used procedures and practices, such as IMC and RWY 29 procedures, trends and observations from occurrence reports and results of normal operations safety surveys.

GM2 ATCO.D.080 Refresher training

REFRESHER TRAINING STRUCTURE

Refresher training may be developed and structured in accordance with the established duration of the rating it refreshes. This may mean structuring the refresher training in modular fashion. For instance, training in standard practices and procedures, abnormal and emergency situations and human factors may be given separately or integrated into any other modules.

AMC1 ATCO.D.080 Refresher training

GENERAL

For the development of the refresher training courses, guidance from the latest EUROCONTROL's document 'ATC Refresher Training Manual' and/or ICAO's Doc 9941 'Training Development Guide Competency-Based Training Methodology' shall be followed. When requesting approval for the refresher training, additional documents must be presented with the course material, verifying implementation of these guidance.

Developers of refresher training must be qualified to design and develop a Standardized Training Packages (STPs), in accordance with ICAO TRAINAIR PLUS competency-based training methodology

Refresher training instructors of the air navigation service provider must be approved by the Department of Civil Aviation and have successfully completed an instructors' course in accordance with TRAINAIR PLUS competency-based training methodology, within three years preceding the provision of the refresher training in question.

AMC2 ATCO.D.080(b)(1);(2) Refresher training

PHRASEOLOGY TRAINING

Training organisations should develop objectives for phraseology.

AMC3 ATCO.D.080(b)(2) Refresher training

ABNORMAL SITUATION AND EMERGENCY TRAINING

Abnormal situation and emergency training should be designed to expose air traffic controllers to circumstances and situations which they do not habitually or commonly experience.

The essential difference from an emergency situation is that the element of danger or serious risk is not necessarily present in an abnormal situation.

GM1 ATCO.D.080(b)(1);(2) Refresher training

EFFECTIVE COMMUNICATION

Communication misunderstanding is present in many air traffic occurrences and the consistent use of approved phraseology is designed to mitigate such occurrences.

For the purpose of refresher training, emphasis is, therefore, put on effective communication, including the use of approved phraseology, both for the use of standard practices and procedures and for abnormal and emergency situations training.

Effective communication should make use of a variety of communication modes, including the use of appropriate phraseology and radio communication.

Phraseology and radio communication training is part of the linguistic training according to ICAO; radio communication phraseology samples offer learning opportunities and foster harmonisation.

AMC1 ATCO.D.080(b)(3) Refresher training

HUMAN FACTORS

(a) Training organisations should train air traffic controllers at least in team resource management, fatigue management and stress management.

(b) The team resource management training may also make use of STD and/or occurrence case studies.

ATCO.D.085 Conversion training

(a) Conversion training course(s) shall be developed and provided by training organisations and approved by the Department of Civil Aviation Aruba.

(b) Conversion training shall be designed to provide knowledge and skills appropriate to a change in the operational environment and shall be provided by training organisations when the safety assessment of the change concludes the need for such training.

(c) Conversion training courses shall include the determination of:

(1) the appropriate training method for and duration of the course, taking into account the nature and extent of the change; and

(2) the examination and/or assessment methods for the conversion training.

(d) Conversion training shall be provided before air traffic controllers exercise the privileges of their licence in the changed operational environment.

SECTION 5 – TRAINING OF INSTRUCTORS AND ASSESSORS

ATCO.D.090 Training of practical instructors

(a) Training of practical instructors shall be developed and provided by training organisations and shall consist of:

(1) a practical instructional techniques course for OJTI. including an assessment;

(2) a refresher training course on practical instructional skills;

(3) a method(s) for assessing the competence of practical instructors.

(b) The training courses and assessment methods referred to in point (a) shall be approved by the Department of Civil Aviation Aruba.

AMC1 ATCO.D.090(a)(1) Training of practical instructors

ASSESSMENT OF INSTRUCTIONAL TECHNIQUES FOR PRACTICAL INSTRUCTORS

A successful assessment of instructional techniques for practical instructors should establish competence at least in the following areas:

(a) regulatory impact on air traffic controller training;

(b) human factors impact on air traffic controller training;

(c) determination of the background and experience of the person undertaking training;

(d) determination of the current level of ability of the person undertaking training;

(e) conduct of a pre-session briefing;

(f) planning and conduct of the training session;

(g) demonstration and explanation of the tasks;

(h) monitoring of the training session;

(i) management of interventions correctly, including error correction;

(j) evaluation of the performance of the person undertaking training;

(k) debrief of the person undertaking training;

(l) furnishing of written reports on the performance of the person undertaking training;

(m) taking appropriate follow-up action towards resolving training problems;

(n) techniques of pausing clocks; and

(o) knowledge of technical facilities/environment.

AMC1 ATCO.D.090(a)(2) Training of practical instructors

REFRESHER TRAINING IN PRACTICAL INSTRUCTIONAL SKILLS

Refresher training in practical instructional skills should prevent knowledge and skills erosion, and, it should be designed to maintain awareness of the current operational practices.

AMC1 ATCO.D.090(a)(3) Training of practical instructors

PRACTICAL INSTRUCTOR COMPETENCE ASSESSMENT

The practical instructor competence assessment for an OJTI may be undertaken either in live operations or on a synthetic training device.

GM1 ATCO.D.090 Training of practical instructors

PRACTICAL INSTRUCTIONAL TECHNIQUES COURSE FOR OJTIS

Further information regarding the practical instructional techniques course for OJTIs can be found among other in EUROCONTROL's document 'Guidelines for ATCO Development Training — OJTI Course Syllabus', Edition 2.0, dated 27.08.2009.

ATCO.D.095 Training of assessors

(a) Training of assessors shall be developed and provided by training organisations and shall consist of:

(1) an assessor training course, including an assessment;

(2) a refresher training course on assessment skills;

(3) a method(s) for assessing the competence of assessors.

(b) The training courses and the assessment method referred to in point (a) shall be approved by the Department of Civil Aviation Aruba.

AMC1 ATCO.D.095(a)(1) Training of assessors

ASSESSOR TRAINING COURSE

A successful assessment for the purpose of the assessor training course should establish competence at least in the following areas of assessment knowledge and techniques:

(a) regulatory environment and legal obligations;

(b) types of assessment and their application;

(c) performance objectives constituting air traffic controller competence;

(d) conditions of assessments to create reliable results;

(e) processing of assessments and administrative procedures;

(f) giving verbal feedback and writing assessment reports;

(g) vested interests and code of conduct;

(h) accurately assessing competence against the performance objectives;

(i) developing a good questioning technique and designing questions appropriate to the assessment.

AMC2 ATCO.D.095(a)(1) Training of assessors

ASSESSMENT OF ASSESSOR COMPETENCE

The assessment of assessor competence should focus on the application of the skills of an assessor. The skills should represent at least a subset of the competences taught during the assessor training course.

AMC1 ATCO.D.095(a)(2) Training of assessors

REFRESHER TRAINING IN ASSESSMENT SKILLS

Refresher training in assessment skills should prevent knowledge and skills erosion and it should be designed to maintain skills in assessment techniques and awareness of the regulatory environment.

GM1 ATCO.D.095(a)(3) Training of assessors

ASSESSMENT OF ASSESSOR COMPETENCE

The level of harmonisation on competence assessment is low as a result of the variety of methods. Any assessment of assessor competence should be realistic and it could take place during live traffic situations or during training.

SUBPART E – REQUIREMENTS FOR AIR TRAFFIC CONTROLLER TRAINING ORGANISATIONS

ATCO.OR.B.001 Application for a training organisation certificate

(a) Applications for a training organisation certificate shall be submitted to the Department of Civil Aviation Aruba in due time to allow evaluation of the application.

(b) Applicants for an initial certificate shall demonstrate to the Department of Civil Aviation Aruba how they will comply with the requirements established in this Regulation.

(c) An application for a training organisation certificate shall include the following information:

(1) the applicant's name and address;

(2) the address(es) of the place(s) of operation;

(3) the names and contact details of:

(i) the accountable manager;

(ii) the head of the training organisation, if different from point (i);

(iii) the person(s) nominated by the training organisation as the focal point(s) for communication with the Department of Civil Aviation Aruba;

(4) date of intended start of activity or change;

(5) a list of types of training to be provided and at least one training course from each type of training that is intended to be provided;

(6) the declaration of compliance with the applicable requirements shall be signed by the accountable manager, stating the training organisation's compliance with the requirements at all times;

(7) the management system processes; and

(8) the date of application.

ATCO.OR.B.010 Terms of approval and privileges of a training organisation certificate

(a) Training organisations shall comply with the scope and privileges defined in the terms of approval attached to the organisation's certificate.

(b) In order to ensure that the applicable requirements in Subpart D are fulfilled, the privilege to provide rating and continuation training shall only be granted to training organisations which:

(1) hold a certificate for the provision of the air traffic control service; or

(2) have concluded a specific agreement with the ATC provider.

ATCO.OR.B.015 Changes to the training organisation

(a) Changes to the organisation that affect the certificate or the terms of approval of the training organisation or any relevant element of the training organisation's management systems shall require prior approval by the Department of Civil Aviation Aruba.

(b) Training organisations shall agree with their competent authority on the changes that require prior approval in addition to those specified in point (a).

(c) For any changes requiring prior approval in accordance with points (a) and (b), the training organisation shall apply for and obtain an approval issued by the Department of Civil Aviation Aruba. The application shall be submitted before any such change takes place in order to enable the Department of Civil Aviation Aruba to determine continued compliance with this Regulation and to amend, if necessary, the training organisation certificate and related terms of approval attached to it.

Training organisations shall provide the competent authority with all relevant documentation.

The change shall only be implemented upon receipt of formal approval by the Department of Civil Aviation Aruba

Training organisations shall operate under the conditions prescribed by the Department of Civil Aviation Aruba during such changes, as applicable.

(d) Changes to the elements referred to in point (a) due to unforeseen circumstances shall be notified to the Department of Civil Aviation without delay in order to obtain approval as necessary.

(e) All changes not requiring prior approval shall be managed and notified to the Department of Civil Aviation Aruba

(f) Training organisations shall notify the Department of Civil Aviation Aruba when they cease their activities.

AMC1 ATCO.OR.B.015 Changes to the training organisation

GENERAL

(a) Training organisations should inform the Department of Civil Aviation Aruba of any changes to personnel specified in in this subpart that may affect the certificate or the training approval attached to it.

(b) Training organisations should send to the Department of Civil Aviation Aruba each management system documentation amendment. Where the amendment requires the Department of Civil Aviation Aruba approval, the training organisation should receive it in writing.

GM1 ATCO.OR.B.015 Changes to the training organisation

GENERAL

(a) Examples of changes that may affect the certificate or the terms of approval of the training organisation or the training organisation's management system are listed below:

  (1) the name of the training organisation;

  (2) change of legal entity;

  (3) the training organisation's principal place of operation;

  (4) the training organisation's type(s) of training;

  (5) additional locations of the training organisation;

  (6) the accountable manager;

  (7) any of the persons referred to in this Subpart;

  (8) the training organisation's documentation as required by Subpart E on safety policy and procedures;

  (9) the facilities.

(b) Prior approval by the Department of Civil Aviation Aruba is required for any changes to the training organisation's procedure describing how changes not requiring prior approval will be managed and notified to the Department of Civil Aviation Aruba.

GM2 ATCO.OR.B.015 Changes to the training organisation

CHANGE OF NAME

A change of name requires the training organisation to submit a new application as a matter of urgency.

Where this is the only change to report, the new application can be accompanied by a copy of the documentation previously submitted to the Department of Civil Aviation Aruba under the previous name, as a means of demonstrating how the training organisation complies with the applicable requirements.

ATCO.OR.B.020 Continued validity

(a) A training organisation's certification shall remain valid subject to the certificate not being surrendered or revoked and subject to the training organisation remaining in compliance with the requirements of this Regulation (, taking into account the provisions related to the handling of findings in accordance with ATCO.OR.B.030.

(b) The certificate shall be returned to the Department of Civil Aviation Aruba without delay upon its revocation or the cease of all activities.

ATCO.OR.B.025 Access to training organisations' facilities and data

Training organisations and applicants for training organisation certificates shall grant access to any person authorised by or acting on behalf of the Department of Civil Aviation Aruba to the relevant premises in order to examine the required records, data, procedures and any other material pertinent to the execution of the tasks of the Department of Civil Aviation Aruba.

ATCO.OR.B.030 Findings

After receipt of notification of findings issued by the Department of Civil Aviation Aruba, the training organisation shall:

(a) identify the root cause of the finding;

(b) define a corrective action plan; and

(c) demonstrate the corrective action implementation to the satisfaction of the Department of Civil Aviation Aruba within the period agreed.

GM1 ATCO.OR.B.030(a);(b) Findings

CORRECTIVE ACTION PLAN AND ROOT CAUSE

(a) Corrective action is the action to eliminate the root cause of a non-compliance in order to prevent its recurrence.

(b) Determination of the root cause is crucial for defining effective corrective actions.

ATCO.OR.B.035 Immediate reaction to a safety problem

The training organisation shall implement any safety measures mandated by the Department of Civil Aviation Aruba for the training organisation activities.

ATCO.OR.B.040 Occurrence reporting

(a) Training organisations providing on-the-job training shall report to the Department of Civil Aviation Aruba, and to any other organisation required by the State of the operator to be informed, any accident, serious incident and occurrence resulting from their training activity.

(b) Reports shall be made as soon as practicable, but in any case within 72 hours of the training organisation identifying the condition to which the report relates, unless exceptional circumstances prevent this.

(c) Where relevant, training organisations shall produce a follow-up report to provide details of actions it intends to take to prevent similar occurrences in the future, as soon as these actions have been identified.

GM1 ATCO.OR.B.040 Occurrence reporting

The training organisation's report should focus on occurrences taking place during on-the-job training with regard to the training aspects involved among others:

1. AIRCRAFT-RELATED OCCURRENCES

(1) A collision or a near collision on the ground or in the air, between an aircraft and another aircraft, terrain or obstacle[5], including near-controlled flight into terrain (near CFIT).

(2) Separation minima infringement[6].

(3) Inadequate separation[7].

(4) ACAS RAs.

(5) Wildlife strike including bird strike.

(6) Taxiway or runway excursion.

(7) Actual or potential taxiway or runway incursion.

(8) Final Approach and Take-off Area (FATO) incursion.

(9) Aircraft deviation from ATC clearance.

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[5] Obstacle includes vehicle.

[6] This refers to a situation in which prescribed separation minima were not maintained between aircraft or between aircraft and airspace to which separation minima is prescribed.

[7] In the absence of prescribed separation minima, a situation in which aircraft were perceived to pass too close to each other for pilots to ensure safe separation.

(10) Aircraft deviation from applicable air traffic management (ATM) regulation:

(a) aircraft deviation from applicable published ATM procedures;

(b) airspace infringement including unauthorised penetration of airspace;

(c) deviation from aircraft ATM-related equipment carriage and operations;

(11) Call sign confusion related occurrences.

2. DEGRADATION OR TOTAL LOSS OF SERVICES OR FUNCTIONS

(1) Inability to provide ATM services or to execute ATM functions:

- (a) inability to provide air traffic services or to execute air traffic services functions;
- (b) inability to provide airspace management services or to execute airspace management functions;
- (c) inability to provide air traffic flow management and capacity services or to execute air traffic flow management and capacity functions.

(2) Missing or significantly incorrect, corrupted, inadequate or misleading information from any support service[8], including relating to poor runway surface conditions.

(3) Failure of communication service.

(4) Failure of surveillance service.

(5) Failure of data processing and distribution function or service.

(6) Failure of navigation service.

(7) Failure of ATM system security which had or could have a direct negative impact on the safe provision of service.

(8) Significant ATS sector/position overload leading to a potential deterioration in service provision.

(9) Incorrect receipt or interpretation of significant communications, including lack of understanding of the language used, when this had or could have a direct negative impact on the safe provision of service.

(10) Prolonged loss of communication with an aircraft or with other ATS unit.

[8] For example: air traffic service (ATS), automatic terminal information service (ATIS), meteorological services, navigation databases, maps, charts, aeronautical information service (AIS), manuals

3. OTHER OCCURRENCES

(1) Declaration of an emergency ('Mayday' or 'PAN' call).

(2) Significant external interference with Air Navigation Services (for example radio broadcast stations transmitting in the FM band, interfering with ILS (instrument landing system), VOR (VHF Omni Directional Radio Range) and communication).

(3) Interference with an aircraft, an ATS unit or a radio communication transmission including by firearms, fireworks, flying kites, laser illumination, high-powered lights lasers, Remotely Piloted Aircraft Systems, model aircraft or by similar means.

(4) Fuel dumping.

(5) Bomb threat or hijack.

(6) Fatigue impacting or potentially impacting the ability to perform safely the air navigation or air traffic duties.

(7) Any occurrence where the human performance has directly contributed to or could have contributed to an accident or a serious incident.

The report may be submitted together with or as an integral part of the report prepared by the air navigation service provider.

ATCO.OR.C.001 Management system of training organisations

Training organisations shall establish, implement and maintain a management system that includes:

(a) clearly defined lines of responsibility and accountability throughout the organisation, including direct safety accountability of the accountable manager;

(b) a description of the overall principles of the organisation with regard to safety, referred to as the safety policy;

(c) the identification of aviation safety hazards entailed by the activities of the training organisation, their evaluation and the management of associated risks, including actions to mitigate the risk and verify their effectiveness;

(d) maintaining personnel trained and competent to perform their tasks;

(e) documentation of all management system key processes, including a process for making personnel aware of their responsibilities and the procedure for amending this documentation;

(f) a function to monitor compliance of the organisation with the relevant requirements. Compliance monitoring shall include a feedback system of findings to the accountable manager to ensure effective implementation of corrective actions as necessary;

(g) the management system shall be proportionate to the size of the organisation and its activities, taking into account the hazards and associated risks inherent in those activities.

GM1 ATCO.OR.C.001 Management system of training organisations

The requirements for the management system of training organisations may be satisfied if the air navigation service provider's management system/safety management system (SMS) specifically covers the requirements of this Regulation.

AMC1 ATCO.OR.C.001(b) Management system of training organisations

SAFETY POLICY

The safety policy should:

(a) be endorsed by the accountable manager;

(b) clearly identify safety as the highest organisational priority over commercial, operational, environmental or social pressures;

(c) include a commitment to:

(1) improve towards the highest safety standards;

(2) comply with all applicable legal requirements, meet all applicable standards and consider best practices;

(3) provide appropriate resources; and

(4) enforce safety as the primary responsibility of all managers and staff;

(d) be communicated, with visible endorsement, throughout the organisation;

(e) include safety reporting and just culture principles;

(f) enhance and embed safety culture and safety awareness; and

(g) be periodically reviewed to ensure it remains relevant and appropriate to the training organisation.

AMC1 ATCO.OR.C.001(c) Management system of training organisations

IDENTIFICATION OF AVIATION SAFETY HAZARDS

For training organisations not providing on-the-job training, the hazard identification process may be limited to a demonstration that there are no hazards directly identified. However, the training should be designed so as to ensure future safe operations.

AMC1 ATCO.OR.C.001(d) Management system of training organisations

PERSONNEL

A training organisation should demonstrate that:

(a) a list of activities with relevant needed competence has been established;

(b) their personnel have the relevant competence needed to fulfil the activities they are required to perform;

(c) their personnel maintain a level of competence through training as appropriate;

(d) their theoretical and practical instructors are qualified in accordance with Subpart C Section 1;

(e) their practical instructors hold an OJT rating

(f) their assessors hold an assessor rating; and

(g) their synthetic training device instructors and assessors demonstrate knowledge of and receive refresher training in current operational practices.

AMC1 ATCO.OR.C.001(e) Management system of training organisations

PROCESSES

Training organisations should demonstrate that the management system:

(a) policies, processes and procedures are monitored to ensure they are current and subject to periodic review and amendment, when necessary, to maintain their continued accuracy and suitability;

(b) allows for the impromptu recognition and initiation of improvements to policies, processes and procedures between periodic reviews;

(c) controls, records and tracks changes to all of the management system policy, process and procedure documents;

(d) includes a master record index that lists all the policies, processes and procedures; and

(e) includes as a minimum the following:

(1) master record index;

(2) training provider certificate;

(3) management structure;

(4) staff role profiles including accountabilities and responsibilities;

(5) training manuals, plans and courses;

(6) evidence of regulatory compliance;

(7) change control process;

(8) safety management manual;

(9) course design documents;

(10) instructor/assessor qualification and competence records.

AMC1 ATCO.OR.C.001(f) Management system of training organisations

COMPLIANCE MONITORING

(a) The implementation and use of a compliance monitoring function should enable the training organisation to monitor compliance with the relevant requirements of this Regulation.

(b) Training organisations should specify the basic structure of the compliance monitoring function applicable to the activities conducted.

(c) The compliance monitoring function should be structured according to the activities of the training organisation to be monitored.

ATCO.OR.C.010 Personnel requirements

(a) Training organisations shall appoint an accountable manager.

(b) A person or persons shall be nominated by the training organisation with the responsibility for training. Such person or persons shall be ultimately responsible to the accountable manager.

(c) Training organisations shall have sufficient qualified personnel for the planned tasks and activities to be performed in accordance with the applicable requirements.

(d) Training organisations shall maintain a record of theoretical instructors with their relevant professional qualifications, adequate knowledge and experience and their demonstration, instructional techniques assessment and subjects they are entitled to teach.

(e) Training organisations shall establish a procedure to maintain competence of the theoretical instructors.

(f) Training organisations shall ensure that practical instructors and assessors successfully complete refresher training in order to revalidate the respective rating.

(g) Training organisations shall maintain a record of persons qualified for assessing practical instructors' competence and assessors' competence.

ATCO.OR.C.015 Facilities and equipment

(a) Training organisations shall have facilities allowing the performance and management of all planned tasks and activities in accordance with this Regulation.

(b) The training organisation shall ensure that the synthetic training devices comply with the applicable specifications appropriate to the task.

(c) During on-the-job training instruction, the training organisation shall ensure that the instructor has exactly the same information as the person undertaking OJT and the means to intervene immediately.

AMC1 ATCO.OR.C.015(a) Facilities and equipment

(a) General areas

A training organisation should have access to facilities appropriate to the size and scope of the intended operations provided in an environment conducive to learning.

(b) Training areas

For training organisations providing theoretical training, the facilities should also include sufficient suitably equipped classroom areas.

ATCO.OR.C.020 Record keeping

(a) Training organisations shall retain detailed records of persons undertaking or having undertaken training to show that all requirements of the training courses have been met.

(b) Training organisations shall establish and maintain a system for recording the professional qualifications and instructional techniques assessments of instructors and assessors, as well as the subjects they are entitled to teach, where appropriate.

(c) The records required in points (a) and (b) shall be retained for a minimum period of five years subject to the applicable national data protection law:

(1) after the person undertaking training has completed the course; and

(2) after the instructor or assessor ceases to perform a function for the training organisation, as applicable.

(d) The archiving process including the format of the records shall be specified in the training organisation's management system.

(e) Records shall be stored in a secure manner.

AMC1 ATCO.OR.C.020(a);(b) Record keeping

Training organisations should maintain the following records:

(a) Records of persons undertaking training:

(1) personal information;

(2) details of training received including the starting date of the training, as well as the results of the examinations and assessments;

(3) detailed and regular progress report forms;

(4) certificate of completion of training courses.

(b) Records of instructors and assessors:

(1) personal information;

(2) qualification records;

(3) records of refresher training for instructors and assessors;

(4) assessment reports;

(5) instructional and/or assessment time records.

Training organisations should submit training records and reports to the Department of Civil Aviation Aruba as required.

APPENDIX 1 BASIC TRAINING

SUBJECT 1: INTRODUCTION TO THE COURSE

The subject objective is: Learners shall know and understand the training programme that they will follow and how to obtain the appropriate information, and recognise the potential for development of their careers in ATC.

TOPIC INTRB 1 — COURSE MANAGEMENT	
Subtopic INTRB 1.1 — Course introduction	
BASIC INTRB 1.1.1	Explain the aims and main objectives of the course.
Subtopic INTRB 1.2 — Course administration	
BASIC INTRB 1.2.1	State how the course is administered
Subtopic INTRB 1.3 — Study material and training documentation	
BASIC INTRB 1.3.1	Use appropriate documents and their sources for the course.
BASIC INTRB 1.3.2	Integrate appropriate information into course studies.

TOPIC INTRB 2 — INTRODUCTION TO THE ATC TRAINING COURSE	
Subtopic INTRB 2.1 — Course content and organisation	
BASIC INTRB 2.1.1	State the different training methods used during the course.
BASIC INTRB 2.1.2	State the subjects covered by the course and their purpose
BASIC INTRB 2.1.3	Describe the organisation of theoretical training.
BASIC INTRB 2.1.4	Describe the organisation of practical training.
Subtopic INTRB 2.2 — Training ethos	
BASIC INTRB 2.2.1	Recognise the feedback mechanisms available.
BASIC INTRB 2.2.2	Describe the positive effect of working and learning together with course participants.
Subtopic INTRB 2.3 — Assessment process	
BASIC INTRB 2.3.1	Describe the assessment process.

TOPIC INTRB 3 — INTRODUCTION TO THE ATCO's FUTURE	
Subtopic INTRB 3.1 — Job prospects	
BASIC INTRB 3.1.1	Recognise an ATCO's working environment.
BASIC INTRB 3.1.2	Recognise career developments.

SUBJECT 2: AVIATION LAW

The subject objective is: Learners shall apply the regulations governing the rules of the air, airspace and flight planning and explain their development or, where applicable, their incorporation into national legislation.

TOPIC LAWB 1 — INTRODUCTION TO AVIATION LAW	
Subtopic LAWB 1.1 — Relevance of aviation law	
BASIC LAWB 1.1.1	State the necessity for air law, the sources and development of aviation law.
BASIC LAWB 1.1.2	Name the key national and international aviation organisations.
BASIC LAWB 1.1.3	Describe the impact these organisations have on ATC and their interaction with each other.

TOPIC LAWB 2 — INTERNATIONAL ORGANISATIONS	
Subtopic LAWB 2.1 — ICAO	
BASIC LAWB 2.1.1	Explain the purpose and function of ICAO.
BASIC LAWB 2.1.2	Describe the methods by which ICAO notifies and implements legislation.
Subtopic LAWB 2.2 — Other agencies	
BASIC LAWB 2.2.1	State the purpose and function of other international agencies and their relevance to air traffic operations.
Subtopic LAWB 2.3 — Aviation associations	
BASIC LAWB 2.3.1	State the purpose of controller, pilot, airline and airspace user associations and their interaction with ATC.

TOPIC LAWB 3 — NATIONAL ORGANISATIONS	
Subtopic LAWB 3.1 — Purpose and function	
BASIC LAWB 3.1.1	Describe the purpose and function of appropriate national agencies and their relevance to air traffic operations.
Subtopic LAWB 3.2 — Competent authority	
BASIC LAWB 3.2.1	Name the competent authority responsible for licensing and enforcing legislation and operational procedures.
BASIC LAWB 3.2.2	Describe how the competent authority carries out its safety regulation responsibilities.

TOPIC LAWB 4 — ATS SAFETY MANAGEMENT	
Subtopic LAWB 4.1 — Safety regulation	
BASIC LAWB 4.1.1	Describe the need for safety regulation.
BASIC LAWB 4.1.2	Describe the general principles of the safety organisation.
BASIC LAWB 4.1.3	Explain the impact of safety regulation on the controller
Subtopic LAWB 4.2 — Safety management system	
BASIC LAWB 4.2.1	Explain the requirements of safety management systems in ATM.
BASIC LAWB 4.2.2	Explain the principles of the safety management systems.
BASIC LAWB 4.2.3	Describe the safety assessment methodology.

TOPIC LAWB 5 — RULES AND REGULATIONS	
Subtopic LAWB 5.1 — Units of measurement	
BASIC LAWB 5.1.1	Describe the units of measurement used in aviation.
Subtopic LAWB 5.2 — ATCO licensing/certification	
BASIC LAWB 5.1.1	Explain the ATCO licensing/certification process.

BASIC LAWB 5.2.2	Explain the privileges and limitations of controller licences.
Subtopic LAWB 5.3 — Overview of ANS and ATS	
BASIC LAWB 5.3.1	Differentiate between the Air Navigation Services.
BASIC LAWB 5.3.2	Explain the considerations which determine the need for the ATS.
BASIC LAWB 5.3.3	Explain the objectives of ATS.
Subtopic LAWB 5.4 — Rules of the air	
BASIC LAWB 5.4.1	Explain the rules of the air.
BASIC LAWB 5.4.2	Appreciate the influence of relevant flight rules on ATC (General flight rules, instrument flight rules, visual flight rules).
BASIC LAWB 5.4.3	Appreciate the differences between flying in accordance with VFR and IFR, in VMC and IMC.
Subtopic LAWB 5.5 — Airspace and ATS routes	
BASIC LAWB 5.5.1	Explain airspace classification.
BASIC LAWB 5.5.2	Differentiate between the different types of airspace.
BASIC LAWB 5.5.3	Differentiate between the different types of ATS routes.
BASIC LAWB 5.5.4	Decode information from aeronautical charts.
Subtopic LAWB 5.6 — Flight plan	
BASIC LAWB 5.6.1	Explain the functions of a flight plan.
BASIC LAWB 5.6.2	Explain the different types of flight plans and associated update messages.
BASIC LAWB 5.6.3	Explain the pilot’s responsibilities in relation to adherence to flight plan.
BASIC LAWB 5.6.4	Describe flight plan processing.
Subtopic LAWB 5.7 — Aerodromes	
BASIC LAWB 5.7.1	Describe the general design and layout of an aerodrome.
BASIC LAWB 5.7.2	Explain the numbering system and orientation of runways.

BASIC LAWB 5.7.3	Differentiate between different types of aerodromes.
BASIC LAWB 5.7.4	Describe designated positions in the traffic circuit.
BASIC LAWB 5.7.5	List the factors affecting the selection of runway in use.
Subtopic LAWB 5.8 — Holding procedures for IFR flights	
BASIC LAWB 5.8.1	Describe the purpose of holding.
BASIC LAWB 5.8.2	Describe the types of holding patterns.
BASIC LAWB 5.8.3	Describe an ICAO holding pattern.
BASIC LAWB 5.8.4	Describe the factors affecting the holding pattern
Subtopic LAWB 5.9 — Holding procedures for VFR flights	
BASIC LAWB 5.9.1	Describe VFR holding

SUBJECT 3: AIR TRAFFIC MANAGEMENT

The subject objective is: Learners shall describe the basic principles of air traffic management and apply basic operational procedures.

TOPIC ATMB 1 — AIR TRAFFIC MANAGEMENT	
Subtopic ATMB 1.1 — Application of units of measurement	
BASIC ATMB 1.1.1	Apply the units of measurement appropriate to ATM.
Subtopic ATMB 1.2 — Air traffic control (ATC) service	
BASIC ATMB 1.2.1	Define ATC service.
BASIC ATMB 1.2.2	Explain the division of the ATC service.
BASIC ATMB 1.2.3	Explain the responsibility for the provision of the ATC service.
BASIC ATMB 1.2.4	Differentiate between the different methods of providing ATC services (Aerodrome, surveillance, procedural).
Subtopic ATMB 1.3 — Flight information service (FIS)	

BASIC ATMB 1.3.1	Define FIS.
BASIC ATMB 1.3.2	Describe the scope of the FIS.
BASIC ATMB 1.3.3	Explain the responsibility for the provision of the FIS.
BASIC ATMB 1.3.4	State the methods of transmitting information.
BASIC ATMB 1.3.5	List the content of ATIS and VOLMET (ICAO Annex 3).
BASIC ATMB 1.3.6	Issue information to aircraft.
Subtopic ATMB 1.4 — Alerting service	
BASIC ATMB 1.4.1	Define ALRS.
BASIC ATMB 1.4.2	Describe the scope of the ALRS (ICAO Annex 11).
BASIC ATMB 1.4.3	Explain the responsibility for the provision of the ALRS (ICAO Doc 4444).
BASIC ATMB 1.4.4	Differentiate between the phases of emergency (Uncertainty, alert, distress)
BASIC ATMB 1.4.5	Describe the organisation of an ALRS.
BASIC ATMB 1.4.6	Describe the cooperation between units providing the alerting services and the SAR units.
BASIC ATMB 1.4.7	Differentiate between distress and urgency signals.
Subtopic ATMB 1.5 — Air traffic advisory service	
BASIC ATMB 1.5.1	Describe the scope of the air traffic advisory service (ICAO Doc 4444)
BASIC ATMB 1.5.3	Explain the responsibility for the provision of the air traffic advisory service (ICAO Doc 4444).
BASIC ATMB 1.5.4	State to which flights air traffic advisory service shall be provided (ICAO Doc 4444).
Subtopic ATMB 1.6 — ATS system capacity and air traffic flow management	
BASIC ATMB 1.6.1	Define ATFM.
BASIC ATMB 1.6.2	State the scope of capacity management (ICAO Doc 4444) .
BASIC ATMB 1.6.3	Describe the scope of air traffic flow capacity management (ATFCM) (ICAO Doc 4444).

BASIC ATMB 1.6.4	Explain the responsibility for the provision of ATFCM (ICAO Doc 4444).
BASIC ATMB 1.6.5	Explain the methods of providing ATFCM (ICAO Doc 4444).
Subtopic ATMB 1.7 — Airspace management (ASM)	
BASIC ATMB 1.7.1	Define ASM.
BASIC ATMB 1.7.2	Describe the scope of ASM.
BASIC ATMB 1.7.3	Explain the responsibility for the provision of ASM.
BASIC ATMB 1.7.4	Explain the methods of managing airspace.

TOPIC ATMB 2 — ALTIMETRY AND LEVEL ALLOCATION	
Subtopic ATMB 2.1 — Altimetry	
BASIC ATMB 2.1.1	Appreciate the relationship between height, altitude and flight level.
Subtopic ATMB 2.2 — Transition level	
BASIC ATMB 2.2.1	Appreciate the relationship between transition level, transition altitude and transition layer.
BASIC ATMB 2.2.2	Calculate the appropriate levels.
Subtopic ATMB 2.3 — Level allocation	
BASIC ATMB 2.3.1	Describe the cruising level allocation system.
BASIC ATMB 2.3.2	Choose the appropriate levels.

TOPIC ATMB 3 — RADIOTELEPHONY (RTF)	
Subtopic ATMB 3.1 — RTF general operating procedures	
BASIC ATMB 3.1.1	Explain the need for approved phraseology.
BASIC ATMB 3.1.2	Use approved phraseology.
BASIC ATMB 3.1.3	Perform communication effectively.

TOPIC ATMB 4 — ATC CLEARANCES AND ATC INSTRUCTIONS	
TOPIC ATMB 4 — ATC CLEARANCES AND ATC INSTRUCTIONS	
BASIC ATMB 4.1.1	Define ATC clearance.
BASIC ATMB 4.1.2	Describe the contents of an ATC clearance (ICAO Doc 4444).
BASIC ATMB 4.1.3	Issue appropriate ATC clearances (ICAO Doc 4444).
Subtopic ATMB 4.2 — ATC instructions	
BASIC ATMB 4.2.1	Define ATC Instructions
BASIC ATMB 4.2.2	Describe the contents of an ATC instruction (ICAO Doc 4444)
BASIC ATMB 4.2.3	Issue appropriate ATC instructions (ICAO Doc 4444).

TOPIC ATMB 5 — COORDINATION	
Subtopic ATMB 5.1 — Principles, types and content of coordination	
BASIC ATMB 5.1.1	Explain the principles, types and content of Coordination (ICAO Doc 4444, ICAO Annex 11).
Subtopic ATMB 5.2 — Necessity for coordination	
BASIC ATMB 5.2.1	Appreciate the need for coordination (ICAO Doc 4444).
BASIC ATMB 5.2.2	Differentiate between transfer of control and transfer of communication procedures.
Subtopic ATMB 5.3 — Means of coordination	
BASIC ATMB 5.3.1	Describe the means of coordination.
BASIC ATMB 5.3.2	Use the available means for coordination.

TOPIC ATMB 6 — DATA DISPLAY	
Subtopic ATMB 6.1 — Data extraction	
BASIC ATMB 6.1.1	Encode and decode an appropriate selection of standard ICAO abbreviations (ICAO Doc 8585, ICAO Doc 8643, ICAO Doc 7910).

BASIC ATMB 6.1.2	Extract pertinent data from relevant sources to produce a flight progress display.
BASIC ATMB 6.1.3	Encode and decode flight plans (including supplementary information). ICAO format, AFTN format
Subtopic ATMB 6.2 — Data management	
BASIC ATMB 6.2.1	Update the situation display to accurately reflect the traffic situation.

TOPIC ATMB 7 — SEPARATIONS	
Subtopic ATMB 7.1 — Vertical separation and procedures	
BASIC ATMB 7.1.1	State the vertical separation standards (ICAO Doc 4444)
BASIC ATMB 7.1.2	Explain the vertical separation procedures (ICAO Doc 4444).
Subtopic ATMB 7.2 — Horizontal separation and procedures	
BASIC ATMB 7.2.1	State the principles of longitudinal separation procedures based on time and distance (ICAO Doc 4444).
BASIC ATMB 7.2.2	State the principles of lateral separation procedures (ICAO Doc 4444).
Subtopic ATMB 7.3 — Visual separation	
BASIC ATMB 7.3.1	State the occasions when clearance to fly by maintaining own separation while in VMC can be used.
Subtopic ATMB 7.4 — Aerodrome separation and procedures	
BASIC ATMB 7.4.1	State the aerodrome separation standards.
BASIC ATMB 7.4.2	Explain the aerodrome separation procedures. (ICAO Doc 4444)
BASIC ATMB 7.4.3	Define essential local traffic (ICAO Doc 4444)
Subtopic ATMB 7.5 — Separation based on ATS surveillance systems	
BASIC ATMB 7.5.1	Explain the use of ATS surveillance systems in ATS.
BASIC ATMB 7.5.2	Explain the ATS surveillance systems separation standards and procedures (ICAO Doc 4444).

Subtopic ATMB 7.6 — Wake turbulence separation	
BASIC ATMB 7.6.1	Explain the wake turbulence separations (ICAO Doc 4444).

TOPIC ATMB 8 — AIRBORNE COLLISION AVOIDANCE SYSTEMS AND GROUND-BASED SAFETY NETS	
Subtopic ATMB 8.1 — Airborne collision avoidance systems	
BASIC ATMB 8.1.1	State the national requirement for carriage of airborne collision avoidance system.
BASIC ATMB 8.1.2	Explain the main characteristics of airborne warning systems and their relevance to ATC operations.
BASIC ATMB 8.1.3	Explain the function of ACAS Traffic Alerts and Resolution Advisories (ICAO Doc 8168).
BASIC ATMB 8.1.4	List the actions of the pilot in case of TA and RA (ICAO Doc 8168.
BASIC ATMB 8.1.5	List the ACAS limitations (ICAO Doc 9863)
Subtopic ATMB 8.2 — Ground-based safety nets	
BASIC ATMB 8.2.1	Explain the main characteristics of groundbased safety nets and their relevance to ATC operations.

TOPIC ATMB 9 — BASIC PRACTICAL SKILLS	
Subtopic ATMB 9.1 — Traffic management process	
BASIC ATMB 9.1.1	Consider human information-processing in the provision of ATC.
BASIC ATMB 9.1.2	Consider the need for verification that actions are carried out.
Subtopic ATMB 9.2 — Basic practical skills applicable to all ratings	
BASIC ATMB 9.2.1	Verify that the settings of the working position are appropriate.
BASIC ATMB 9.2.2	Operate the available working position equipment.
BASIC ATMB 9.2.3	Maintain situational awareness by monitoring traffic.
BASIC ATMB 9.2.4	Appreciate priority of actions.

BASIC ATMB 9.2.5	Execute selected plan.
BASIC ATMB 9.2.6	Apply the prescribed procedures for the area of responsibility.
BASIC ATMB 9.2.7	Appreciate relative velocity between aircraft.
BASIC ATMB 9.2.8	Identify separation problems.
BASIC ATMB 9.2.9	Choose the appropriate separation methods.
BASIC ATMB 9.2.10	Apply separation.
Subtopic ATMB 9.3 — Basic practical skills applicable to aerodrome	
BASIC ATMB 9.3.1	Perform the basic functions of aerodrome control.
BASIC ATMB 9.3.2	Perform the control of aerodrome traffic
Subtopic ATMB 9.4 — Basic practical skills applicable to surveillance	
BASIC ATMB 9.4.1	Explain the methods and procedures of establishing identification (ICAO Doc 4444).
BASIC ATMB 9.4.2	Apply the procedures for establishing identification.
BASIC ATMB 9.4.3	Estimate the heading for a new track and the distance to the next waypoint.
BASIC ATMB 9.4.4	Apply vectoring techniques
BASIC ATMB 9.4.5	Conduct level changes.

SUBJECT 4: METEOROLOGY

The subject objective is: Learners shall describe how meteorology affects ATS operations and aircraft performance, and apply meteorological information in the basic operational procedures of ATS.

TOPIC METB 1 — INTRODUCTION TO METEOROLOGY	
Subtopic METB 1.1 — Application of units of measurement	
BASIC METB 1.1.1	Apply the units of measurement appropriate to meteorology.
Subtopic METB 1.2 — Aviation and meteorology	

BASIC METB 1.2.1	Explain the relevance of meteorology in aviation.
BASIC METB 1.2.2	Explain the requirements for the provision of meteorological information available to operators, flight crew members, and to air traffic services (ICAO Annex 3, ICAO Annex 11)
BASIC METB 1.2.3	State the meteorological hazards to aviation.
Subtopic METB 1.3 — Organisation of meteorological service	
BASIC METB 1.3.1	Name the basic duties, organisation and working methods of meteorological offices.
BASIC METB 1.3.2	State the international and national standards for coordination between ATS and MET services

TOPIC METB 2 — ATMOSPHERE	
Subtopic METB 2.1 — Composition and structure	
BASIC METB 2.1.1	State the composition and structure of the atmosphere.
BASIC METB 2.1.2	Describe the basic characteristics of the atmospheric parameters measured.
BASIC METB 2.1.3	List the tools used for the collection of meteorological data.
Subtopic METB 2.2 — Standard atmosphere	
BASIC METB 2.2.1	Describe the elements of the ISA.
BASIC METB 2.2.2	State the reasons why the ISA has been defined.
Subtopic METB 2.3 — Heat and temperature	
BASIC METB 2.3.1	Define the processes by which heat is transferred and how the atmosphere is heated
BASIC METB 2.3.2	Describe how temperature varies
BASIC METB 2.3.3	State the influencing factors on surface temperature.
Subtopic METB 2.4 — Water in the atmosphere	
BASIC METB 2.4.1	Differentiate between the different processes related to atmospheric moisture.
BASIC METB 2.4.2	Characterise relative humidity, dew point and latent heat

Subtopic METB 2.5 — Air pressure	
BASIC METB 2.5.1	Describe the relationship between pressure, temperature, density and height
BASIC METB 2.5.2	Explain the relationship between pressure settings.
BASIC METB 2.5.3	Explain the effect of air pressure and temperature on altimeter readings and the true altitude of aircraft.
BASIC METB 2.5.4	State how atmospheric pressure is measured.

TOPIC METB 3 — ATMOSPHERIC CIRCULATION	
Subtopic METB 3.1 — General air circulation	
BASIC METB 3.1.1	State the major atmospheric circulation features on the Earth.
Subtopic METB 3.2 — Air masses and frontal systems	
BASIC METB 3.2.1	Describe the origin and movement of typical air masses and their general effect on European weather
BASIC METB 3.2.2	Describe the main isobaric features
BASIC METB 3.2.3	Describe the difference between various fronts and the associated weather.
Subtopic METB 3.3 — Mesoscale systems	
BASIC METB 3.3.1	Describe the main phenomena caused by mesoscale systems.
BASIC METB 3.3.2	Explain the relevance of mesoscale systems to aviation.
Subtopic METB 3.4 — Wind	
BASIC METB 3.4.1	Explain the significance of wind phenomena and types
BASIC METB 3.4.2	State how wind is measured.
BASIC METB 3.4.3	Explain the effect of forces which influence wind.

TOPIC METB 4 — METEOROLOGICAL PHENOMENA
Subtopic METB 4.1 — Clouds

BASIC METB 4.1.1	Explain the different conditions for the formation of clouds.
BASIC METB 4.1.2	Recognise different cloud types.
BASIC METB 4.1.3	State the cloud types' main characteristics.
BASIC METB 4.1.4	State how the cloud base and the amount of cloud are measured and/or observed.
BASIC METB 4.1.5	Define cloud base and ceiling.
BASIC METB 4.1.6	Differentiate between cloud base and ceiling.
Subtopic METB 4.2 — Types of precipitation	
BASIC METB 4.2.1	Explain the significance of precipitation in aviation.
BASIC METB 4.2.2	Describe types of precipitation and their corresponding cloud families.
Subtopic METB 4.3 — Visibility	
BASIC METB 4.3.1	Explain the causes of atmospheric obscurity.
BASIC METB 4.3.2	Differentiate between different types of visibility.
BASIC METB 4.3.3	State how visibility is measured.
BASIC METB 4.3.4	Explain the significance of visibility in aviation.
Subtopic METB 4.4 — Meteorological hazards	
BASIC METB 4.4.1	Explain the meteorological hazards to aviation.
BASIC METB 4.4.2	Describe the effect of meteorological hazards on aviation.

TOPIC METB 5 — METEOROLOGICAL INFORMATION FOR AVIATION	
Subtopic METB 5.1 — Messages and reports	
BASIC METB 5.1.1	Decode the content of weather reports and forecasts (METAR, SPECI, TAF, SIGMET).

SUBJECT 5: NAVIGATION

The subject objective is: Learners shall explain the basic principles of navigation and use this knowledge in ATS operations.

TOPIC NAVB 1 — INTRODUCTION TO NAVIGATION	
Subtopic NAVB 1.1 — Application of units of measurement	
BASIC NAVB 1.1.1	Apply the units of measurement appropriate to navigation.
Subtopic NAVB 1.2 — Purpose and use of navigation	
BASIC NAVB 1.2.1	Explain the need for navigation in aviation
BASIC NAVB 1.2.2	Characterise navigation methods.

TOPIC NAVB 2 — THE EARTH	
Subtopic NAVB 2.1 — Place and movement of the Earth	
BASIC NAVB 2.1.1	Explain the Earth's properties and their effects.
Subtopic NAVB 2.2 — System of coordinates, direction and distance	
BASIC NAVB 2.2.1	Characterise the general principles of a grid system.
BASIC NAVB 2.2.2	Explain direction and distance on a globe.
BASIC NAVB 2.2.3	Estimate position on the Earth's surface.
BASIC NAVB 2.2.4	Estimate distance and direction between two points.
BASIC NAVB 2.2.5	State the reference system used in aviation.
Subtopic NAVB 2.3 — Magnetism	
BASIC NAVB 2.3.1	Explain the general principles of the Earth's magnetism.
BASIC NAVB 2.3.2	Calculate conversions between the three north designations.

TOPIC NAVB 3 — MAPS AND AERONAUTICAL CHARTS	
Subtopic NAVB 3.1 — Map making and projections	
BASIC NAVB 3.1.1	State how the Earth is projected to create a map.
BASIC NAVB 3.1.2	Describe the properties of a map.

BASIC NAVB 3.1.3	Describe the properties of an ideal map.
BASIC NAVB 3.1.4	State the properties and use of different projections.
Subtopic NAVB 3.2 — Maps and charts used in aviation	
BASIC NAVB 3.2.1	Differentiate between the various maps and charts.
BASIC NAVB 3.2.2	State the specific use of various maps and charts.
BASIC NAVB 3.2.3	Decode symbols and information displayed on maps and charts

TOPIC NAVB 4 — NAVIGATIONAL BASICS	
Subtopic NAVB 4.1 — Influence of wind	
BASIC NAVB 4.1.1	Appreciate the influence of wind on the flight path.
Subtopic NAVB 4.2 — Speed	
BASIC NAVB 4.2.1	Explain the relationship between various speeds used in aviation.
BASIC NAVB 4.2.2	Appreciate the use of various speeds in ATC.
Subtopic NAVB 4.3 — Visual navigation	
BASIC NAVB 4.3.1	Describe visual navigation.
BASIC NAVB 4.3.2	State the cases where visual navigation is primarily used in commercial aviation.
Subtopic NAVB 4.4 — Navigational aspects of flight planning	
BASIC NAVB 4.4.1	Describe the navigational aspects affecting flight planning.

TOPIC NAVB 5 — INSTRUMENT NAVIGATION	
Subtopic NAVB 5.1 — Ground-based systems	
BASIC NAVB 5.1.1	Explain the basic working principles of ground-based systems (VDF, NDB, VOR, DME, ILS).
BASIC NAVB 5.1.2	State the use of ground-based systems
BASIC NAVB 5.1.3	Characterise the main radio navigation techniques based on ground-based systems.

BASIC NAVB 5.1.4	Explain the accuracy and limitations of ground-based systems.
Subtopic NAVB 5.2 — Inertial navigation systems	
BASIC NAVB 5.2.1	Explain the basic working principles, precision and limitations of on-board systems.
BASIC NAVB 5.2.2	State the use of on-board systems.
Subtopic NAVB 5.3 — Satellite-based systems	
BASIC NAVB 5.3.1	Explain the basic working principles of a satellite positioning system.
BASIC NAVB 5.3.2	State the basic principles of GNSS concept(Basic, ABAS, SBAS, GBAS) .
BASIC NAVB 5.3.3	Explain the limitations of satellite-based systems.
Subtopic NAVB 5.4 — Instrument approach procedures	
BASIC NAVB 5.4.1	Recognise various types of instrument approach using aeronautical charts.
BASIC NAVB 5.4.2	Differentiate between precision approach and non-precision approach procedures.
BASIC NAVB 5.4.3	Recognise the different minima used during an instrument approach.
BASIC NAVB 5.4.4	Define the terms appropriate to instrument approach minima.
BASIC NAVB 5.4.5	List the instrumental approach fixes.

TOPIC NAVB 6 — PERFORMANCE-BASED NAVIGATION	
Subtopic NAVB 6.1 — Principles and benefits of area navigation	
BASIC NAVB 6.1.1	Explain the basic principles of area navigation.
BASIC NAVB 6.1.2	State the benefits of area navigation.
BASIC NAVB 6.1.3	State the effects of navigational performance accuracy of RNAV systems on the flight.
BASIC NAVB 6.1.4	Characterise the main aircraft and avionics functionalities used in area navigation.
BASIC NAVB 6.1.5	Characterise the navigational functions of FMS.
Subtopic NAVB 6.2 — Introduction to PBN	
BASIC NAVB 6.2.1	State the general concept of PBN.

BASIC NAVB 6.2.2	Differentiate between RNAV and RNP
BASIC NAVB 6.2.3	State the navigation infrastructure that may be used in PBN.
BASIC NAVB 6.2.4	State the benefits of PBN concept.
BASIC NAVB 6.2.5	List the navigation specifications and the phases of flight they are applicable to.
Subtopic NAVB 6.3 — PBN applications	
BASIC NAVB 6.3.1	State the navigation applications used in Europe.

TOPIC NAVB 7 — DEVELOPMENTS IN NAVIGATION	
Subtopic NAVB 7.1 — Future developments	
BASIC NAVB 7.1.1	State future developments in navigation.

SUBJECT 6: AIRCRAFT

The subject objective is: Learners shall describe the basic principles of the theory of flight and aircraft characteristics and how these influence ATS operations.

TOPIC ACFTB 1 — INTRODUCTION TO AIRCRAFT	
Subtopic ACFTB 1.1 — Application of units of measurement	
BASIC ACFTB 1.1.1	Apply the units of measurement appropriate to aircraft and principles of flight.
Subtopic ACFTB 1.2 — Aviation and aircraft	
BASIC ACFTB 1.2.1	Explain the relevance of theory of flight and aircraft characteristics in ATS operations.

TOPIC ACFTB 2 — PRINCIPLES OF FLIGHT	
Subtopic ACFTB 2.1 — Forces acting on aircraft	
BASIC ACFTB 2.1.1	Explain the forces acting on an aircraft in flight and their interaction.
BASIC ACFTB 2.1.2	Explain causes and effects of wake turbulence.

Subtopic ACFTB 2.2 — Structural components and control of an aircraft	
BASIC ACFTB 2.2.1	Describe the main structural components of an aircraft
BASIC ACFTB 2.2.2	Explain how the pilot controls the movements of an aircraft.
BASIC ACFTB 2.2.3	Explain the factors affecting aircraft stability.
Subtopic ACFTB 2.3 — Flight envelope	
BASIC ACFTB 2.3.1	Characterise the critical factors which affect aircraft performance.

TOPIC ACFTB 3 — AIRCRAFT CATEGORIES	
Subtopic ACFTB 3.1 — Aircraft categories	
BASIC ACFTB 3.1.1	List the different categories of aircraft.
Subtopic ACFTB 3.2 — Wake turbulence categories	
BASIC ACFTB 3.2.1	List the wake turbulence categories (ICAO Doc 4444).
Subtopic ACFTB 3.3 — ICAO approach categories	
BASIC ACFTB 3.3.1	List the ICAO approach categories (ICAO Doc 8168).
Subtopic ACFTB 3.4 — Environmental categories	
BASIC ACFTB 3.4.1	List ICAO noise classification (ICAO annex 16)

TOPIC ACFTB 4 — AIRCRAFT DATA	
Subtopic ACFTB 4.1 — Recognition	
BASIC ACFTB 4.1.1	Recognise the most commonly used aircraft.
Subtopic ACFTB 4.2 — Performance data	
BASIC ACFTB 4.2.1	State the ICAO aircraft type designators and categories for the most commonly used aircraft.
BASIC ACFTB 4.2.2	State the standard average performance data of the most commonly used aircraft.

TOPIC ACFTB 5 — AIRCRAFT ENGINES	
Subtopic ACFTB 5.1 — Piston engines	
BASIC ACFTB 5.1.1	Explain the operating principles, advantages and disadvantages of the piston engine and propeller.
Subtopic ACFTB 5.2 — Jet engines	
BASIC ACFTB 5.2.1	Explain the operating principles, advantages and disadvantages of the jet engine.
BASIC ACFTB 5.2.2	List the different types of jet engines.
Subtopic ACFTB 5.3 — Turboprop engines	
BASIC ACFTB 5.3.1	Explain the operating principles, advantages and disadvantages of the turboprop engine and propeller.
Subtopic ACFTB 5.4 — Aviation fuels	
BASIC ACFTB 5.4.1	List the most common aviation fuels.

TOPIC ACFTB 6 — AIRCRAFT SYSTEMS AND INSTRUMENTS	
Subtopic ACFTB 6.1 — Flight instruments	
BASIC ACFTB 6.1.1	Explain the basic operating principles and interpretation of the information displayed by flight instruments.
BASIC ACFTB 6.1.2	Explain the impact of errors and abnormal indications of flight instruments on aircraft operations
Subtopic ACFTB 6.2 — Navigational instruments	
BASIC ACFTB 6.2.1	Describe the basic on-board operating principles and interpretation of the information displayed by navigational instruments/systems.
Subtopic ACFTB 6.3 — Engine instruments	
BASIC ACFTB 6.3.1	List the vital engine monitoring parameters and their associated instruments
Subtopic ACFTB 6.4 — Aircraft systems	
BASIC ACFTB 6.4.1	Explain the use of the most common aircraft systems.

BASIC ACFTB 6.4.2	Explain the impact of degradation/failure of the most common aircraft systems on aircraft operations (e.g. Engine failure).

TOPIC ACFTB 7 — FACTORS AFFECTING AIRCRAFT PERFORMANCE	
Subtopic ACFTB 7.1 — Take-off factors	
BASIC ACFTB 7.1.1	Explain the factors affecting aircraft during take-off.
Subtopic ACFTB 7.2 — Climb factors	
BASIC ACFTB 7.2.1	Explain the factors affecting aircraft during climb
Subtopic ACFTB 7.3 — Cruise factors	
BASIC ACFTB 7.3.1	Explain the factors affecting aircraft during cruise.
Subtopic ACFTB 7.4 — Descent and initial approach factors	
BASIC ACFTB 7.4.1	Explain the factors affecting aircraft during descent.
BASIC ACFTB 7.4.2	Explain the factors affecting an aircraft in a holding pattern
BASIC ACFTB 7.4.3	Explain the benefits of continuous descent operations.
Subtopic ACFTB 7.5 — Final approach and landing factors	
BASIC ACFTB 7.5.1	Explain the factors affecting aircraft during final approach and landing.
Subtopic ACFTB 7.6 — Economic factors	
BASIC ACFTB 7.6.1	Explain the economic consequences of ATC changes on the flight profile of an aircraft.
Subtopic ACFTB 7.7 — Environmental factors	
BASIC ACFTB 7.7.1	Explain performance restrictions due to environmental considerations.

SUBJECT 7: HUMAN FACTORS

The subject objective is: Learners shall characterise factors which affect personal and team performance.

TOPIC HUMB 1 — INTRODUCTION TO HUMAN FACTORS	
Subtopic HUMB 1.1 — Learning techniques	
BASIC HUMB 1.1.1	Appreciate appropriate learning techniques.
Subtopic HUMB 1.2 — Relevance of human factors for ATC	
BASIC HUMB 1.2.1	Explain the relevance and importance of human factors.
Subtopic HUMB 1.3 — Human factors and ATC	
BASIC HUMB 1.3.1	Define human factors.
BASIC HUMB 1.3.2	Explain the relationship between human factors and the aviation environment.
BASIC HUMB 1.3.3	Explain the concept of systems.
BASIC HUMB 1.3.4	Explain ATM in systems terms.
BASIC HUMB 1.3.5	Explain the consequences of a system failure in ATS.
BASIC HUMB 1.3.6	Explain the need for matching human and equipment.
BASIC HUMB 1.3.7	Explain the information requirement of ATC.
BASIC HUMB 1.3.8	Describe the role of the human in the evolution of ATC.
BASIC HUMB 1.3.9	Explain the importance of situational awareness for decision-making.

TOPIC HUMB 2 — HUMAN PERFORMANCE	
Subtopic HUMB 2.1 — Individual behaviour	
BASIC HUMB 2.1.1	Explain the differences and commonalities that exist among people.
BASIC HUMB 2.1.2	Explain the dangers of boredom.
BASIC HUMB 2.1.3	Explain the dangers of overconfidence and complacency.
BASIC HUMB 2.1.4	Explain the dangers of fatigue (sleep disturbance, heavy workload).

Subtopic HUMB 2.2 — Safety culture and professional conduct	
BASIC HUMB 2.2.1	Characterise the role of air traffic controller for positive safety culture.
BASIC HUMB 2.2.2	Describe the need for professional standards in ATC.
BASIC HUMB 2.2.3	Appreciate the needed basic professional attitude appropriate to a high level of safety.
BASIC HUMB 2.2.4	Describe the impact of responsibility on controllers' action(s).
BASIC HUMB 2.2.5	Recognise the different responsibilities of a controller.
Subtopic HUMB 2.3 — Health and well-being	
BASIC HUMB 2.3.1	Consider the effect of health on performance.
Subtopic HUMB 2.4 — Teamwork	
BASIC HUMB 2.4.1	Describe the differences between social human relations and professional interactions
BASIC HUMB 2.4.2	Describe the different types and characters in a team.
BASIC HUMB 2.4.3	Appreciate the principles of teamwork.
BASIC HUMB 2.4.4	Describe leader style and group interaction
Subtopic HUMB 2.5 — Basic needs of people at work	
BASIC HUMB 2.5.1	List basic needs of people at work.
BASIC HUMB 2.5.2	Characterise the factors of work satisfaction.
Subtopic HUMB 2.6 — Stress	
BASIC HUMB 2.6.1	Define stress.
BASIC HUMB 2.6.2	Describe stress symptoms and sources.
BASIC HUMB 2.6.3	Describe the stages of stress.
BASIC HUMB 2.6.4	Appreciate techniques for stress management.

TOPIC HUMB 3 — HUMAN ERROR

Subtopic HUMB 3.1 — Dangers of error	
BASIC HUMB 3.1.1	Recognise the dangers of error in ATC.
Subtopic HUMB 3.2 — Definition of human error	
BASIC HUMB 3.2.1	Define human error.
BASIC HUMB 3.2.2	Describe the factors which contribute to cause error.
Subtopic HUMB 3.3 — Classification of human error	
BASIC HUMB 3.3.1	State the types of errors.
BASIC HUMB 3.3.2	Define violations.
BASIC HUMB 3.3.3	Differentiate between errors and violations of rules.
BASIC HUMB 3.3.4	Describe the three levels of performance according to the Rasmussen model.
Subtopic HUMB 3.4 — Risk analysis and risk management	
BASIC HUMB 3.4.1	Describe risk analysis and risk management of human systems and error.
BASIC HUMB 3.4.2	Apply one risk analysis model on error during a case study.

TOPIC HUMB 4 — COMMUNICATION	
Subtopic HUMB 4.1 — Importance of good communication in ATC	
BASIC HUMB 4.1.1	Appreciate the importance of good communication in ATC.
Subtopic HUMB 4.2 — Communication process	
BASIC HUMB 4.2.1	Define communication.
BASIC HUMB 4.2.2	Define the communication process.
Subtopic HUMB 4.3 — Communication modes	
BASIC HUMB 4.3.1	Describe the factors which affect verbal communication.
BASIC HUMB 4.3.2	Describe the factors which affect non-verbal communication
BASIC HUMB 4.3.3	Apply good communication practices.

TOPIC HUMB 5 — THE WORK ENVIRONMENT	
Subtopic HUMB 5.1 — Ergonomics and the need for good design	
BASIC HUMB 5.1.1	Define ergonomics.
BASIC HUMB 5.1.2	Recognise the need for good building design.
BASIC HUMB 5.1.3	Explain the need for good work position design.
Subtopic HUMB 5.2 — Equipment and tools	
BASIC HUMB 5.2.1	Characterise the equipment and tools that will be used in simulation in accordance with the SHELL model.
Subtopic HUMB 5.3 — Automation	
BASIC HUMB 5.3.1	Explain the reasons for automation.
BASIC HUMB 5.3.2	Describe the advantages and constraints of automation.

SUBJECT 8: EQUIPMENT AND SYSTEMS

The subject objective is: Learners shall explain the basic working principles of equipment that is generally used in ATC and appreciate how this equipment aids the controller in providing safe and efficient ATS.

TOPIC EQPSB 1 — ATC EQUIPMENT	
Subtopic EQPSB 1.1 — Main types of ATC equipment	
BASIC EQPSB 1.1.1	Explain the relevance of ATC equipment.

TOPIC EQPSB 2 — RADIO	
Subtopic EQPSB 2.1 — Radio theory	
BASIC EQPSB 2.1.1	State the principles of radio waves.

BASIC EQPSB 2.1.2	Describe the characteristics of radio waves.
BASIC EQPSB 2.1.3	State the use, characteristics and limitations of frequency bands.
BASIC EQPSB 2.1.4	State the different uses of radio wave spectrum.
Subtopic EQPSB 2.2 — Direction finding	
BASIC EQPSB 2.2.1	State the principles and use of VDF/UDF.
BASIC EQPSB 2.2.2	State the precision of VDF/UDF used in the State system.

TOPIC EQPSB 3 — COMMUNICATION EQUIPMENT	
Subtopic EQPSB 3.1 — Radio communications	
BASIC EQPSB 3.1.1	State the use of the radio in ATC.
BASIC EQPSB 3.1.2	Describe the working principles of a transmitting and receiving system.
BASIC EQPSB 3.1.3	Explain the effect of antenna shadowing on RTF communications.
Subtopic EQPSB 3.2 — Voice communication between ATS units/positions	
BASIC EQPSB 3.2.1	Describe the use of other voice communications in ATC.
Subtopic EQPSB 3.3 — Data link communications	
BASIC EQPSB 3.3.1	Explain the use and benefits of Controller Pilot Data Link Communications (CPDLC).
Subtopic EQPSB 3.4 — Airline communications	
BASIC EQPSB 3.4.1	State the use of SELCAL.
BASIC EQPSB 3.4.2	Explain the use and benefits of Aircraft Communications Addressing and Reporting System (ACARS).

TOPIC EQPSB 4 — INTRODUCTION TO SURVEILLANCE	
Subtopic EQPSB 4.1 — Surveillance concept in ATS	
BASIC EQPSB 4.1.1	Describe the concept of surveillance for the provision of ATS.

TOPIC EQPSB 5 — RADAR	
Subtopic EQPSB 5.1 — Principles of radar	
BASIC EQPSB 5.1.1	State the principles of radar.
BASIC EQPSB 5.1.2	Recognise the characteristics of radar wavelengths.
BASIC EQPSB 5.1.3	Recognise the use, characteristics and limitations of different radar types.
Subtopic EQPSB 5.2 — Primary radar	
BASIC EQPSB 5.2.1	Explain the working principles of PSR
Subtopic EQPSB 5.3 — Secondary radar	
BASIC EQPSB 5.3.1	Explain the working principles of SSR.
BASIC EQPSB 5.3.2	Explain SSR code management
BASIC EQPSB 5.3.3	Explain the effect of antenna shadowing on SSR operation.
Subtopic EQPSB 5.4 — Use of radars	
BASIC EQPSB 5.4.1	Explain the use of PSR/SSR in ATC.
BASIC EQPSB 5.4.2	Explain the advantages and disadvantages of PSR/SSR.
Subtopic EQPSB 5.5 — Mode S	
BASIC EQPSB 5.5.1	Explain the principles of Mode S.
BASIC EQPSB 5.5.2	Explain the use of Mode S in ATC systems.

TOPIC EQPSB 6 — AUTOMATIC DEPENDENT SURVEILLANCE	
Subtopic EQPSB 6.1 — Principles of automatic dependent surveillance	
BASIC EQPSB 6.1.1	State the different applications of ADS
BASIC EQPSB 6.1.2	Explain the working principles of ADS.
Subtopic EQPSB 6.2 — Use of automatic dependent surveillance	
BASIC EQPSB 6.2.1	Describe the use of ADS in ATC.

BASIC EQPSB 6.2.2	Explain the limitations of ADS.

TOPIC EQPSB 7 — MULTILATERATION	
Subtopic EQPSB 7.1 — Principles of multilateration	
BASIC EQPSB 7.1.1	State the different applications of MLAT.
BASIC EQPSB 7.1.2	Explain the working principles of MLAT.
Subtopic EQPSB 7.2 — Use of multilateration	
BASIC EQPSB 7.2.1	Describe the use of MLAT in ATC (Area, approach, aerodrome).
BASIC EQPSB 7.2.2	Explain the limitations of MLAT (Dependency on airborne equipment)

TOPIC EQPSB 8 — SURVEILLANCE DATA PROCESSING	
Subtopic EQPSB 8.1 — Surveillance data networking	
BASIC EQPSB 8.1.1	Explain the advantages and disadvantages of different surveillance technologies.
BASIC EQPSB 8.1.2	Describe the implementation of Surveillance Data Networks.
Subtopic EQPSB 8.2 — Working principles of surveillance data networking	
BASIC EQPSB 8.2.1	Explain the working principles of surveillance data processing.
BASIC EQPSB 8.2.2	State other use of processed surveillance data.

TOPIC EQPSB 9 — FUTURE EQUIPMENT	
Subtopic EQPSB 9.1 — New developments	
BASIC EQPSB 9.1.1	State the developments in the equipment field for introduction in the near future.

TOPIC EQPSB 10 — AUTOMATION IN ATS	
Subtopic EQPSB 10.1 — Principles of automation	
BASIC EQPSB 10.1.1	Describe the principles of automation in communication and data links in ATS.

Subtopic EQPSB 10.2 — Aeronautical fixed telecommunication network (AFTN)	
BASIC EQPSB 10.2.1	Describe the principles of AFTN
Subtopic EQPSB 10.3 — Online data interchange	
BASIC EQPSB 10.3.1	Describe the benefits of automatic exchange of ATS data in coordination and transfer processes
BASIC EQPSB 10.3.2	Describe the limitations of automatic exchange of ATS data in coordination.
Subtopic EQPSB 10.4 — Systems used for the automatic dissemination of information	
BASIC EQPSB 10.4.1	State the working principles of broadcasting systems.
BASIC EQPSB 10.4.2	Explain the use of ATIS and VOLMET in ATS.

TOPIC EQPSB 11 — WORKING POSITIONS	
Subtopic EQPSB 11.1 — Working position equipment	
BASIC EQPSB 11.1.1	Recognise equipment in a working position.
Subtopic EQPSB 11.2 — Aerodrome control	
BASIC EQPSB 11.2.1	Recognise equipment to be found specifically in a TWR.
Subtopic EQPSB 11.3 — Approach control	
BASIC EQPSB 11.3.1	Recognise equipment to be found specifically in an APP.

SUBJECT 9: PROFESSIONAL ENVIRONMENT

The subject objective is: Learners shall recognise the need for close cooperation with other parties concerning ATM operations and aspects of environmental protection.

TOPIC PENB 1 — FAMILIARISATION	
Subtopic PENB 1.1 — ATS and aerodrome facilities	
BASIC PENB 1.1.1	Recognise civil and military ATS facilities.
BASIC PENB 1.1.2	Recognise airport facilities and local operators.

TOPIC PENB 2 — AIRSPACE USERS	
Subtopic PENB 2.1 — Civil aviation	
BASIC PENB 2.1.1	Describe airspace usage by civil aircraft.
Subtopic PENB 2.2 — Military	
BASIC PENB 2.2.1	Describe airspace usage by the military.
Subtopic PENB 2.3 — Expectations and requirements of pilots	
BASIC PENB 2.3.1	Recognise the expectations and requirements of pilots.
BASIC PENB 2.3.2	State the use of Standard Operating Procedures (SOPs) by aircraft operators.

TOPIC PENB 3 — CUSTOMER RELATION	
Subtopic PENB 3.1 — Customer relations	
BASIC PENB 3.1.1	State the role of ATC as a service provider.
BASIC PENB 3.1.2	Recognise the means by which ATC is funded.

TOPIC PENB 4 — ENVIRONMENTAL PROTECTION	
Subtopic PENB 4.1 — Environmental protection	
BASIC PENB 4.1.1	Describe the impact aviation has on the environment.
BASIC PENB 4.1.2	Explain the role of ATC in the concept of sustainable development.
BASIC PENB 4.1.3	State how to measure, monitor and mitigate the impact aviation has on the environment

APPENDIX 2 RATING TRAINING TWR / APP

The ATCO rating training Aerodrome Control Rating for Tower (TWR) / Approach Control Procedural Rating (APP should contain the following subject objectives and training objectives.

SUBJECT 1: INTRODUCTION TO THE COURSE

The subject objective is: Learners shall know and understand the training programme that they will follow and learn how to obtain the appropriate information.

TOPIC INTR 1 — COURSE MANAGEMENT	
Subtopic INTR 1.1 — Course introduction	
TWR / APP INTR 1.1.1	Explain the aims and main objectives of the course.
Subtopic INTR 1.2 — Course administration	
TWR / APP INTR 1.2.1	State how the course is administered
Subtopic INTR 1.3 — Study material and training documentation	
TWR / APPINTR 1.3.1	Use appropriate documents and their sources for the course.
TWR/ APP INTR 1.3.2	Integrate appropriate information into course studies.

TOPIC INTR 2 — INTRODUCTION TO THE ATC TRAINING COURSE	
Subtopic INTR 2.1 — Course content and organisation	
TWR/ APP INTR 2.1.1	State the different training methods used during the course.
TWR/ APP INTR 2.1.2	State the subjects covered by the course and their purpose
TWR/ APP INTR 2.1.3	Describe the organisation of theoretical training.
TWR/ APP INTR 2.1.4	Describe the organisation of practical training.
Subtopic INTR 2.2 — Training ethos	
TWR/ APP INTR 2.2.1	Recognise the feedback mechanisms available.
Subtopic INTR 2.3 — Assessment process	

TWR/ APP INTRB 2.3.1	Describe the assessment process.

SUBJECT 2: AVIATION LAW

The subject objective is: Learners shall know, understand and apply the Rules of the Air regarding reporting and airspace, and appreciate the Licensing and Competence principles .

TOPIC LAW 1 — RULES AND REGULATIONS	
Subtopic LAW 1.1 — Airspace	
TWR LAW 1.1.1	Appreciate airspace classes and structure and their relevance to operations using the Tower rating.
APP LAW 1.1.1	Appreciate airspace classes and structure and their relevance to operations using the Approach Control Procedural rating.
TWR/ APP LAW 1.1.2	Provide planning, coordination and control actions appropriate to the classification and structure of airspace.
TWR/ APP LAW 1.1.3	Appreciate responsibility for terrain clearance.

TOPIC LAW 2 — ATS SAFETY MANAGEMENT	
Subtopic LAW 2.1 — Feedback process	
TWR/APP LAW 2.1.1	State the importance of controller contribution to the feedback process.
TWR / APP LAW 2.1.2	Describe how reported occurrences are analysed
TWR / APP LAW 2.1.3	Name the means used to disseminate recommendations
TWR /APP LAW 2.1.4	Appreciate the 'Just Culture' concept.
Subtopic LAW 2.2 — Safety Investigation	
TWR /APP LAW 2.2.1	Describe role and mission of Safety Investigation in the improvement of safety
TWR/ APP LAW 2.2.2	Define working methods of Safety Investigation.

SUBJECT 3: AIR TRAFFIC MANAGEMENT

The subject objective is: Learners shall manage air traffic to ensure safe, orderly and expeditious services.

TOPIC ATM 1 — PROVISION OF SERVICES	
Subtopic ATM 1.1 — Aerodrome control service	
TWR /APP ATM 1.1.1	Appreciate areas of responsibility
TWR ATM 1.1.2	Provide aerodrome control service
APP ATM 1.1.2	Provide approach control service. (ICAO Annex 11, ICAO Doc 7030, ICAO Doc 4444, operation manuals)
Subtopic ATM 1.2 — Flight information service (FIS)	
TWR ATM 1.2.1	Describe the information that shall be passed on to aircraft by an aerodrome controller.
TWR / APP ATM 1.2.2	Provide FIS
APP ATM 1.2.2	Issue appropriate information concerning the position of conflicting traffic (ICAO Doc 4444)
TWR ATM 1.2.3	Issue appropriate information.
TWR/APP ATM 1.2.4	Appreciate the use of ATIS in the provision of flight information service
Subtopic ATM 1.3 — Alerting service (ALRS)	
TWR/ APP ATM 1.3.1	Provide ALRS (ICAO Doc 4444).
TWR / APP ATM 1.3.2	Respond to distress and urgency messages and signals. (ICAO Annex 10, ICAO Doc 4444)
Subtopic ATM 1.4 — ATS system capacity and air traffic flow management	
TWR ATM 1.4.1	Appreciate the impact of ATS system capacity and air traffic flow management on the controller.
APP ATM 1.4.1	Appreciate the impact of ATS system capacity and air traffic flow management on the controller.
TWR ATM 1.4.2	Organise traffic to take account of flow management.

APP ATM 1.4.2	Apply flow management procedures in the provision of ATC.
TWR ATM 1.4.3	Inform the appropriate authority of local factors affecting ATS system capacity and air traffic flow management.
APP ATM 1.4.3	Organise traffic flows and patterns to take account of airspace boundaries.
APP ATM 1.4.4	Organise traffic flows and patterns to take account of areas of responsibility
APP ATM 1.4.5	Inform supervisor of local factors affecting ATS system capacity and air traffic flow management.
Subtopic ATM 1.5 — Airspace management (ASM)	
APP ATM 1.5.1	Appreciate the impact of ASM on the controller.
APP ATM 1.5.2	Organise traffic to take account of ASM.

TOPIC ATM 2 — COMMUNICATION	
Subtopic ATM 2.1 — Effective communication	
TWR/ APP ATM 2.1.1	Use approved phraseology.
TWR/APP ATM 2.1.2	Ensure effective communication.

TOPIC ATM 3 — ATC CLEARANCES AND ATC INSTRUCTIONS	
Subtopic ATM 3.1 — ATC clearances	
TWR/ APP ATM 3.1.1	Issue appropriate ATC clearances (ICAO Doc 4444).
TWR /APP ATM 3.1.2	Integrate appropriate ATC clearances in control service.
TWR/ APP ATM 3.1.3	Ensure the agreed course of action is carried out.
Subtopic ATM 3.2 — ATC instructions	
TWR/ APP ATM 3.2.1	Issue appropriate ATC instructions (ICAO Doc 4444).
TWR / APP ATM 3.2.2	Integrate appropriate ATC instructions in control service
TWR /APP ATM 3.2.3	Ensure the agreed course of action is carried out.

TOPIC ATM 4 — COORDINATION	
Subtopic ATM 4.1 — Necessity for coordination	
TWR /APP ATM 4.1.1	Identify the need for coordination.
Subtopic ATM 4.2 — Tools and methods for coordination	
TWR / APP ATM 4.1.1	Use the available tools for coordination.
Subtopic ATM 4.3 — Coordination procedures	
TWR /APP ATM 4.3.1	Initiate appropriate coordination.
TWR/ APP ATM 4.3.2	Analyse effect of coordination requested by an adjacent position/unit.
TWR/ APP ATM 4.3.3	Select, after negotiation, an appropriate course of action.
TWR / APP ATM 4.3.4	Ensure the agreed course of action is carried out.
TWR / APP ATM 4.3.5	Coordinate when providing FIS (ICAO Doc 4444).
TWR / APP ATM 4.3.6	Coordinate when providing ALRS (ICAO Doc 4444).

TOPIC ATM 5 — ALTIMETRY AND LEVEL ALLOCATION	
Subtopic ATM 5.1 — Altimetry	
TWR/ APP ATM 5.1.1	Allocate levels according to altimetry data.
TWR /APP ATM 5.1.2	Ensure separation according to altimetry data.
Subtopic ATM 5.2 — Terrain clearance	
TWR / APP ATM 5.2.1	Provide planning, coordination and control actions appropriate to the rules for minimum safe height and terrain clearance.

TOPIC ATM 6 TWR— SEPARATIONS	
Subtopic ATM 6.1 — Separation between departing aircraft	
TWR ATM 6.1.1	Provide separation between departing aircraft (ICAO Doc 4444).
Subtopic ATM 6.2 — Separation of departing aircraft from arriving aircraft	

TWR ATM 6.2.1	Provide separation of departing aircraft from arriving aircraft (ICAO Doc 4444).
Subtopic ATM 6.3 — Separation of landing aircraft and preceding landing or departing aircraft	
TWR ATM 6.3.1	Provide separation of landing aircraft and preceding landing or departing aircraft (ICAO Doc 4444).
Subtopic ATM 6.4 — Time-based wake turbulence longitudinal separation	
TWR ATM 6.4.1	Provide time-based wake turbulence longitudinal separation (ICAO Doc 4444).

TOPIC ATM 6 APP — SEPARATIONS	
Subtopic ATM 6.1 — Vertical separation	
APP ATM 6.1.1	Provide standard vertical separation. (ICAO Doc 4444)
APP ATM 6.1.2	Provide increased vertical separation. (ICAO Doc 4444)
APP ATM 6.1.3	Appreciate the application of emergency vertical separation. (ICAO Doc 4444, ICAO Doc 7030)
Subtopic ATM 6.2 — Horizontal separation	
APP ATM 6.2.1	Provide longitudinal separation.
APP ATM 6.2.2	Provide lateral separation (ICAO Doc 4444, ICAO Doc 7030, holding).
APP ATM 6.2.3	Provide track separation.
APP ATM 6.2.4	Provide geographical separation.
Subtopic ATM 6.3 — Delegation of separation	
APP ATM 6.3.1	Delegate separation to pilots in the case of aircraft executing successive visual approaches.
APP ATM 6.3.2	Appreciate the conditions which must be met when delegating separation to pilots to fly maintaining own separation while in VMC.

TOPIC ATM 7 — AIRBORNE COLLISION AVOIDANCE SYSTEMS AND GROUND-BASED SAFETY NETS
Subtopic ATM 7.1 — Airborne collision avoidance systems

TWR ATM 7.1.1	Differentiate between ACAS advisory thresholds and aerodrome separation Standards (ICAO Doc 9863).
APP ATM 7.1.1	Differentiate between ACAS advisory thresholds and separation standards applicable in the approach control environment. (ICAO Doc 9863).
TWR /APP ATM 7.1.2	Describe the controller responsibility during and following an ACAS RA reported by pilot (ICAO Doc 4444).
TWR / APP ATM 7.1.3	Respond to pilot notification of actions based on airborne systems warnings
Subtopic ATM 7.2 — Ground-based safety nets	
TWR ATM 7.2.1	Respond to available ground-based safety nets warnings.

TOPIC ATM 8 — DATA DISPLAY	
Subtopic ATM 8.1 — Data management	
TWR/ APP ATM 8.1.1	Update the data display to accurately reflect the traffic situation.
TWR/ APP ATM 8.1.2	Analyse pertinent data on data displays.
TWR / APP ATM 8.1.3	Organise pertinent data on data displays.
TWR / APP ATM 8.1.4	Obtain flight plan information.
TWR / APP ATM 8.1.5	Use flight plan information.

TOPIC ATM 9 — OPERATIONAL ENVIRONMENT (SIMULATED)	
Subtopic ATM 9.1 — Integrity of the operational environment	
TWR /APP ATM 9.1.1	Obtain information concerning the operational environment.
TWR / APP ATM 9.1.2	Ensure the integrity of the operational environment.
Subtopic ATM 9.2 — Verification of the currency of operational procedures	
TWR ATM 9.2.1	Check all relevant documentation before managing traffic.
APP ATM 9.2.2	Manage traffic in accordance with a change to operational procedures.
Subtopic ATM 9.3 — Handover–takeover	

TWR/ APP ATM 9.3.1	Transfer information to the relieving controller.
TWR/ APP ATM 9.3.2	Obtain information from the controller handing over.

TOPIC ATM 10 TWR— PROVISION OF AN AERODROME CONTROL SERVICE	
Subtopic ATM 10.1 — Responsibility for the provision	
TWR/ ATM 10.1.1	Explain the responsibility for the provision of an aerodrome control service (ICAO Doc 4444).
TWR ATM 10.1.2	Describe the division of responsibility among air traffic control units (ICAO Doc 4444).
TWR ATM 10.1.3	Describe the responsibility in regard to military traffic (ICAO Doc 4444).
TWR ATM 10.1.4	Appreciate the influence of operational requirements.
Subtopic ATM 10.2 — Functions of aerodrome control tower	
TWR ATM 10.2.1	Manage the general functions of aerodrome control (ICAO Doc 4444).
TWR ATM 10.2.2	Manage the suspension of VFR operations.
Subtopic ATM 10.3 — Traffic management process	
TWR ATM 10.3.1	Ensure that situational awareness is maintained.
TWR ATM 10.3.2	Detect conflicts in time for appropriate resolution.
TWR ATM 10.3.3	Identify potential solutions to achieve a safe and effective flow of aerodrome traffic.
TWR ATM 10.3.4	Evaluate possible outcomes of different control actions.
TWR ATM 10.3.5	Select an appropriate plan in time to achieve safe and effective flow of aerodrome traffic.
TWR ATM 10.3.6	Ensure an adequate priority of actions.
TWR ATM 10.3.7	Execute plan in a timely manner
TWR ATM 10.3.8	Ensure a safe and efficient outcome is achieved.

Subtopic ATM 10.4 — Aeronautical ground lights	
TWR ATM 10.4.1	Select appropriate aeronautical ground lights (ICAO Doc 4444).
Subtopic ATM 10.5 — Information to aircraft by aerodrome control tower	
TWR ATM 10.5.1	Provide information related to the operation of aircraft (ICAO Doc 4444).
TWR ATM 10.5.2	Provide information on aerodrome conditions (ICAO Doc 4444).
Subtopic ATM 10.6 — Control of aerodrome traffic	
TWR ATM 10.6.1	Predict positions of aircraft in the aerodrome traffic and taxi circuits. (ICAO Doc 4444)
TWR ATM 10.6.2	Manage traffic on the manoeuvring area (ICAO Doc 4444).
TWR ATM 10.6.3	Manage traffic in accordance with a change to operational procedures.
TWR ATM 10.6.4	Balance the workload against personal capacity.
Subtopic ATM 10.7 — Control of traffic in the traffic circuit	
TWR ATM 10.7.1	Manage traffic in the traffic circuit (ICAO Doc 4444).
TWR ATM 10.7.2	Manage arriving and departing traffic (ICAO Doc 4444).
TWR ATM 10.7.3	Integrate the serviceability of radio aids in the management of aerodrome traffic.
TWR ATM 10.7.4	Integrate surface conditions into the control of aerodrome traffic.
TWR ATM 10.7.5	Integrate information about meteorological phenomena into the control of aerodrome traffic
TWR ATM 10.7.6	Integrate the information provided by situation displays.
TWR ATM 10.7.7	Initiate missed approach.
Subtopic ATM 10.8 — Runway in use	
TWR ATM 10.8.1	Select the runway in use (ICAO Doc 4444).
TWR ATM 10.8.2	Coordinate runway in use.
TWR ATM 10.8.3	Manage traffic in the event of runway-in-use change.

TOPIC ATM 10 APP— PROVISION OF CONTROL SERVICE	
Subtopic ATM 10.1 — Responsibility and processing of information	
APP ATM 10.1.1	Describe the division of responsibility among air traffic control units.
APP ATM 10.1.2	Describe the responsibility in regard to military traffic (ICAO Doc 4444).
APP ATM 10.1.3	Obtain operational information (ICAO Doc 4444, local operation manuals).
APP ATM 10.1.4	Interpret operational information
APP ATM 10.1.5	Organise forwarding of operational information.
APP ATM 10.1.6	Integrate operational information into control decisions.
APP ATM 10.1.7	Appreciate the influence of operational requirements.
Subtopic ATM 10.2 — Approach control	
APP ATM 10.2.1	Explain the responsibility for the provision of an approach procedural control service. (ICAO Doc 4444, ICAO Annex 11, local operation manuals)
APP ATM 10.2.2	Provide planning, coordination and control actions appropriate to VFR, SVFR and IFR traffic in VMC and IMC. (ICAO Annex 11, ICAO Doc 4444)
Subtopic ATM 10.3 — Traffic management process	
APP ATM 10.3.1	Ensure that situational awareness is maintained.
APP ATM 10.3.2	Detect conflicts in time for appropriate resolution.
APP ATM 10.3.3	Identify potential solutions to achieve a safe and effective traffic flow.
APP ATM 10.3.4	Evaluate possible outcomes of different planning and control actions.
APP ATM 10.3.5	Select an appropriate plan in time to achieve safe and effective traffic flow.
APP ATM 10.3.6	Ensure an adequate priority of actions.
APP ATM 10.3.7	Execute selected plan in a timely manner.
APP ATM 10.3.8	Ensure a safe and efficient outcome is achieved.
Subtopic ATM 10.4 — Handling traffic	
APP ATM 10.4.1	Manage arrivals and departures.

APP ATM 10.4.2	Balance the workload against personal capacity.
APP ATM 10.4.3	Manage traffic on different types of approaches.
APP ATM 10.4.4	Initiate missed approach. (ICAO Doc 4444)
APP ATM 10.4.5	Integrate aircraft on missed approach into the traffic situation.

TOPIC ATM 11 TWR — PROVISION OF AERODROME CONTROL	
Subtopic ATM 11.1 — Low-visibility operations and special VFR	
TWR ATM 11.1.1	Manage SVFR traffic (ICAO Doc 4444).
TWR ATM 11.1.2	Describe the procedures for lowvisibility operations (ICAO Doc 4444).
Subtopic ATM 11.2 — Departing traffic	
TWR ATM 11.2.1	Manage control of departing aircraft (ICAO Doc 4444)
TWR ATM 11.2.2	Integrate departure sequence into the control of aerodrome traffic (ICAO Doc 4444).
TWR ATM 11.2.3	Provide appropriate information to departing traffic (ICAO Doc 4444).
Subtopic ATM 11.3 — Arriving traffic	
TWR ATM 11.3.1	Manage control of arriving aircraft (ICAO Doc 4444).
TWR ATM 11.3.2	Integrate the approach sequence into the control of aerodrome traffic (ICAO Doc 4444).
TWR ATM 11.3.3	Integrate aircraft on visual approach into the aerodrome traffic (ICAO Doc 4444).
TWR ATM 11.3.4	Integrate aircraft on missed approach into the aerodrome traffic.
TWR ATM 11.3.5	Integrate aircraft performing circling approach into the aerodrome traffic (ICAO Doc 8168 Volume II).
TWR ATM 11.3.6	Provide appropriate information to arriving aircraft (ICAO Doc 4444).
Subtopic ATM 11.4 — Aerodrome control service with advanced system support	
TWR ATM 11.4.1	Appreciate the impact of advanced systems on the provision of aerodrome control service.

TOPIC ATM 11 APP— HOLDING	
Subtopic ATM 11.1 — General holding procedures	
APP ATM 11.1.1	Apply holding procedures. (ICAO Doc 4444)
APP ATM 11.1.2	Appreciate the factors affecting holding patterns.
Subtopic ATM 11.2 — Approaching aircraft	
APP ATM 11.2.1	Issue Expected Approach Times (EATs).
APP ATM 11.2.2	Organise the traffic landing sequence in a holding pattern.

SUBJECT 4: METEOROLOGY

The subject objective is: Learners shall acquire, decode and make proper use of meteorological information relevant to the provision of ATS.

TOPIC MET 1 — METEOROLOGICAL PHENOMENA	
Subtopic MET 1.1 — Meteorological phenomena	
TWR MET 1.1.1	Appreciate the impact of different cloud types.
APP MET 1.1.1	Appreciate the impact of adverse weather on aircraft.
TWR MET 1.1.2	Appreciate the impact of precipitation.
TWR MET 1.1.3	Appreciate the impact of atmospheric obscurity.
TWR MET 1.1.4	Appreciate the effect and impact of wind.
TWR MET 1.1.5	Appreciate the effect and danger of hazardous meteorological phenomena.
TWR MET 1.1.6	Appreciate the effect of a frontal system on aerodrome operations.
APP MET 1.1.2	Integrate data about meteorological phenomena into the provision of ATS.
APP MET 1.1.3	Use techniques to avoid adverse weather when necessary/possible.

TOPIC MET 2 — SOURCES OF METEOROLOGICAL DATA

Subtopic MET 2.1 — Meteorological instruments	
TWR MET 2.1.1	Extract information from meteorological instruments.
APP MET 2.1.1	Obtain meteorological information.
Subtopic MET 2.2 — Other sources of meteorological data	
TWR MET 2.2.1	Decode information from meteorological data displays.
TWR MET 2.2.2	Use appropriate communication tools and networks to obtain meteorological data.
TWR/APP MET 2.2.3	Relay meteorological information (ICAO Doc 4444).

SUBJECT 5: NAVIGATION

The subject objective is: Learners shall analyse all navigational aspects in order to organise the traffic

TOPIC NAV 1 — MAPS AND AERONAUTICAL CHARTS	
Subtopic NAV 1.1 — Maps and charts	
TWR NAV 1.1.1	Decode symbols and information displayed on aeronautical maps and charts.
TWR NAV 1.1.2	Use relevant maps and charts.
APP NAV 1.1.2	Use relevant maps and charts

TOPIC NAV 2 — INSTRUMENT NAVIGATION	
Subtopic NAV 2.1 — Navigational systems	
TWR NAV 2.1.1	Describe how the operational status of navigational systems may change.
TWR NAV 2.1.2	Decode operational status displays of navigational systems.
TWR NAV 2.1.3	Appreciate the effect of a change on the operational status of navigational systems.
TWR / APP NAV 2.1.4	Manage traffic in case of change in the operational status of navigational systems.
Subtopic NAV 2.2 — Stabilised approach	
TWR NAV 2.2.1	Describe the concept of stabilised approach.

TWR NAV 2.2.2	Appreciate the effect of late change of runway-in-use for landing aircraft.
APP NAV 2.2.2	Appreciate the effect of late change of runway-in-use or type of approach for landing aircraft.
APP NAV 2.2.3	Appreciate controller actions that may contribute to unstabilised approach.
Subtopic NAV 2.3 — Instrument departures and arrivals	
TWR/APP NAV 2.3.1	Describe relevant SIDs and STARs
TWR/APP NAV 2.3.2	Describe the types and phases of an instrument approach procedure.
TWR NAV 2.3.3	Describe the relevant minima applicable for a precision/non-precision and visual approach.
APP NAV 2.3.4	Evaluate the necessary information to be provided to pilots in need of navigational assistance.
Subtopic NAV 2.4 — Satellite-based systems	
TWR NAV 2.4.1	State the different applications of satellite-based systems relevant for aerodrome operations.
APP NAV 2.5.1	State the different applications of satellite-based systems relevant for approach operations
TWR NAV 2.5.1	State future PBN developments.
Subtopic NAV 2.6 — PBN applications	
APP NAV 2.6.1	State the navigation applications used in approach and terminal environments.
APP NAV 2.6.2	Explain the principles and designation of navigation specifications in use.
APP NAV 2.6.3	State future PBN developments.

SUBJECT 6: AIRCRAFT

The subject objective is: Learners shall assess and integrate aircraft performance in the provision of ATS.

TOPIC ACFT 1 — AIRCRAFT INSTRUMENTS

Subtopic ACFT 1.1 — Aircraft instruments	
TWR/ APP ACFT 1.1.1	Integrate information from aircraft instruments provided by the pilot in the provision of ATS
TWR/ APP ACFT 1.1.2	Explain the operation of aircraft radio equipment.
TWR/ APP ACFT 1.1.3	Explain the operation of on-board surveillance equipment

TOPIC ACFT 2 — AIRCRAFT CATEGORIES	
Subtopic ACFT 2.1 — Wake turbulence	
TWR / APP ACFT 2.1.1	Explain the wake turbulence effect and associated hazards to succeeding aircraft.
TWR / APP ACFT 2.1.2	Appreciate the techniques used to prevent hazards associated with wake turbulence to succeeding aircraft.
Subtopic ACFT 2.2 — Application of ICAO approach categories	
TWR / APP ACFT 2.2.1	Describe the use of ICAO approach categories (ICAO Doc 8168).
TWR/ APP ACFT 2.2.2	Appreciate the effect of ICAO approach categories on the organisation of traffic.

TOPIC ACFT 3 — FACTORS AFFECTING AIRCRAFT PERFORMANCE	
Subtopic ACFT 3.1 — Take-off factors	
TWR ACFT 3.1.1	Integrate the influence of factors affecting aircraft on take-off.
APP ACFT 3.1.1	Integrate the influence of factors affecting aircraft during climb.
Subtopic ACFT 3.2 — Climb factors	
TWR ACFT 3.2.1	Appreciate the influence of factors affecting aircraft during climb.
APP ACFT 3.2.2	Describe the influence of factors affecting departing aircraft
Subtopic ACFT 3.3 — Final approach and landing factors	
TWR ACFT 3.3.1	Integrate the influence of factors affecting aircraft during final approach and landing.
Subtopic ACFT 3.4 — Cruise factors	

APP ACFT 3.4.1	Integrate the influence of factors affecting aircraft during cruise.
Subtopic ACFT 3.5 — Descent and initial approach factors	
APP ACFT 3.5.1	Integrate the influence of factors affecting aircraft during descent.
Subtopic ACFT 3.6 — Final approach and landing factors	
APP ACFT 3.6.1	Integrate the influence of factors affecting aircraft during final approach and landing.
Subtopic ACFT 3.7 — Economic factors	
TWR/APP ACFT 3.7.1	Integrate consideration of economic factors affecting aircraft.
APP ACFT 3.7.2	Use continuous climb techniques where applicable.
APP ACFT 3.7.3	Use direct routing where applicable
Subtopic ACFT 3.8 — Environmental factors	
TWR/ APP ACFT 3.8.1	Appreciate the performance restrictions due to environmental constraints.

TOPIC ACFT 4 — AIRCRAFT DATA	
Subtopic ACFT 4.1 — Recognition of aircraft types	
TWR ACFT 4.1.1	Characterise a representative sample of aircraft which will be encountered in the operational/working environment.
APP ACFT 4.1.1	Integrate the average performance data of a representative sample of aircraft which will be encountered in the operational/ working environment into the provision of control service.
Subtopic ACFT 4.2 — Performance data	
TWR ACFT 4.2.1	Integrate the average performance data of a representative sample of aircraft which will be encountered in the operational/ working environment into the provision of control service.

SUBJECT 7: HUMAN FACTORS

The subject objective is:	Learners shall recognise the necessity to constantly extend their knowledge and analyse factors which affect personal and team performance.

TOPIC HUM 1 — PSYCHOLOGICAL FACTORS	
Subtopic HUM 1.1 — Cognitive	
TWR APP HUM 1.1.1	Describe the human informationprocessing model.
TWR/APP HUM 1.1.2	Describe the factors which influence human information-processing.
TWR HUM/APP 1.1.3	Monitor the effect of human information-processing factors on decision-making.

TOPIC HUM 2 — MEDICAL AND PHYSIOLOGICAL FACTORS	
Subtopic HUM 2.1 — Fatigue	
TWR / APPHUM 2.1.1	State factors that cause fatigue.
TWR/ APP HUM 2.1.2	Describe the onset of fatigue.
TWR/APP HUM 2.1.3	Recognise the onset of fatigue in self
TWR/APP HUM 2.1.4	Recognise the onset of fatigue in others
TWR/APP HUM 2.1.5	Describe appropriate action when recognising fatigue.
Subtopic HUM 2.2 — Fitness	
TWR HUM /APP2.2.1	Recognise signs of lack of personal fitness.
TWR HUM/APP 2.2.2	Describe actions when aware of a lack of personal fitness.

TOPIC HUM 3 — SOCIAL AND ORGANISATIONAL FACTORS	
Subtopic HUM 3.1 — Team resource management (TRM)	
TWR/ APP HUM 3.1.1	State the relevance of TRM.
TWR/ APP HUM 3.1.2	State the content of the TRM concept
Subtopic HUM 3.2 — Teamwork and team roles	
TWR/ APP HUM 3.2.1	Identify reasons for conflict.

TWR/APP HUM 3.2.2	Describe actions to prevent human conflicts.
TWR / APP HUM 3.2.3	Describe strategies to cope with human conflicts.
Subtopic HUM 3.3 — Responsible behaviour	
TWR/ APP HUM 3.3.1	Consider the factors which influence responsible behaviour.
TWR / APP HUM 3.3.2	Apply responsible judgement.

TOPIC HUM 4 — STRESS	
Subtopic HUM 4.1 — Stress	
TWR/ APP HUM 4.1.1	Recognise the effects of stress on performance.
Subtopic HUM 4.2 — Stress management	
TWR/ APP HUM 4.2.1	Act to reduce stress.
TWR/ APP HUM 4.2.2	Respond to stressful situations by offering, asking or accepting assistance.
TWR/ APP HUM 4.2.3	Recognise the effect of shocking and stressful events.
TWR/ APP HUM 4.2.4	Consider the benefits of Critical Incident Stress Management (CISM).
TWR/ APP HUM 4.2.5	Explain procedures to be used following an incident/accident.

TOPIC HUM 5 — HUMAN ERROR	
Subtopic HUM 5.1 — Human error	
TWR/APP HUM 5.1.1	Explain the relationship between error and safety.
TWR/ APP HUM 5.1.2	Differentiate between the types of error.
TWR/ APP HUM 5.1.3	Describe error-prone conditions
TWR/ APP HUM 5.1.4	Collect examples of different error types, their causes and consequences for ATC. (ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control)
TWR/ APP HUM 5.1.5	Explain how to detect errors to compensate for them. (ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control)

TWR/ APP HUM 5.1.6	Execute corrective actions. (ICAO Circular 314 — AN/178 Threat and Error Management (TEM) in Air Traffic Control)
TWR/ APP HUM 5.1.7	Explain the importance of error management.
TWR/ APP HUM 5.1.8	Describe the impact on an ATCO's performance following an occurrence/incident
Subtopic HUM 5.2 — Violation of rules	
TWR/ APP HUM 5.2.1	Explain the causes and dangers of violation of rules becoming accepted as a practice

TOPIC HUM 6 — COLLABORATIVE WORK	
Subtopic HUM 6.1 — Communication	
TWR/ APP HUM 6.1.1	Use communication effectively in ATC.
TWR/ APP HUM 6.1.2	Analyse examples of pilot–controller communication for effectiveness.
Subtopic HUM 6.2 — Collaborative work within the same area of responsibility	
TWR/ APP HUM 6.2.1	List communication means between controllers in charge of the same area of responsibility (sector or tower).
TWR/APP HUM 6.2.2	Explain consequences of the use of communication means on effectiveness.
TWR/APP HUM 6.2.3	List possible actions to provide a safe position handover.
TWR/APP HUM 6.2.4	Explain consequences of a missed position handover process.
Subtopic HUM 6.3 — Collaborative work between different areas of responsibility	
TWR/APP HUM 6.3.1	List factors and means for an effective coordination between sectors and/or tower positions.
Subtopic HUM 6.4 — Controller–pilot cooperation	
TWR/ APP HUM 6.4.1	Describe parameters affecting controller–pilot cooperation.

SUBJECT 8: EQUIPMENT AND SYSTEMS

The subject objective is:	Learners shall integrate knowledge and understanding of the basic working principles of equipment and systems, and comply with the equipment and system degradation procedures in the provision of ATS.

TOPIC EQPS 1 — VOICE COMMUNICATIONS	
Subtopic EQPS 1.1 — Radio communications	
TWR / APP EQPS 1.1.1	Operate two-way communication equipment.
TWR/ APP EQPS 1.1.2	Identify indications of operational status of radio equipment.
APP EQPS 1.1.3	Consider radio range.
Subtopic EQPS 1.2 — Other voice communications	
TWR/APP EQPS 1.2.1	Operate landline communications.

TOPIC EQPS 2 — AUTOMATION IN ATS	
Subtopic EQPS 2.1 — Aeronautical fixed telecommunication network (AFTN)	
TWR/APP EQPS 2.1.1	Decode AFTN messages.
Subtopic EQPS 2.2 — Automatic data interchange	
TWR/APP EQPS 2.2.1	Use automatic data transfer equipment where available
TWR EQPS 2.2.2	Explain operational application of CPDLC for departure clearance (DCL) delivery and D-ATIS. (ICAO Doc 9694)

TOPIC EQPS 3 — CONTROLLER WORKING POSITION	
Subtopic EQPS 3.1 — Operation and monitoring of equipment	
TWR/APP EQPS 3.1.1	Monitor the technical integrity of the controller working position.
TWR/APP EQPS 3.1.2	Operate the equipment of the controller working position.
TWR/APP EQPS 3.1.3	Operate available equipment in abnormal and emergency situations.
Subtopic EQPS 3.2 — Situation displays and information systems	
TWR/APP EQPS 3.2.1	Use situation displays.

TWR.APP EQPS 3.2.2	Check availability of information.
TWR/APP EQPS 3.2.3	Obtain information from equipment.
TWR EQPS 3.2.4	Take account of anti-incursion equipment.
TWR EQPS 3.2.5	Explain the use of ASMGCS.
Subtopic EQPS 3.3 — Flight data systems	
TWR/APP EQPS 3.3.1	Use the flight data information at controller working position.

TOPIC EQPS 4 — FUTURE EQUIPMENT	
Subtopic EQPS 4.1 — New developments	
TWR/APP EQPS 4.1.1	Recognise future developments.

TOPIC EQPS 5 — EQUIPMENT AND SYSTEMS' LIMITATIONS AND DEGRADATION	
Subtopic EQPS 5.1 — Reaction to limitations	
TWR/APP EQPS 5.1.1	Take account of the limitations of equipment and systems.
TWR/APP EQPS 5.1.2	Respond to technical deficiencies of the operational position.
Subtopic EQPS 5.2 — Communication equipment degradation	
TWR/ APP EQPS 5.2.1	Identify that communication equipment has degraded.
TWR/ APP EQPS 5.2.2	Apply contingency procedures in the event of communication equipment degradation.
Subtopic EQPS 5.3 — Navigational equipment degradation	
TWR/APP EQPS 5.3.1	Identify when a navigational equipment failure will affect operational ability.
TWR/APP EQPS 5.3.2	Apply contingency procedures in the event of a navigational equipment degradation.

SUBJECT 9: PROFESSIONAL ENVIRONMENT

The subject objective is: Learners shall identify the need for close cooperation with other parties concerning ATM operations and appreciate aspects of environmental protection.

TOPIC PEN 1 — AIRSPACE USERS	
Subtopic PEN 1.1 — Contributors to civil ATS operations	
TWR/APP PEN 1.1.1	Characterise civil ATS activities at aerodrome.
TWR/APP PEN 1.1.2	Characterise other parties interfacing with ATS operations.
Subtopic PEN 1.2 — Contributors to military ATS operations	
TWR/APP PEN 1.2.1	Characterise military ATS activities.

TOPIC PEN 2 — CUSTOMER RELATIONS	
Subtopic PEN 2.1 — Provision of services and user requirements	
TWR/APP PEN 3.1.1	Identify the role of ATC as a service provider.
TWR/APP PEN 3.1.2	Appreciate ATS users' requirements.

TOPIC PEN 3 — ENVIRONMENTAL PROTECTION	
Subtopic PEN 3.1 — Environmental protection	
TWR/APP PEN 3.1.1	Describe the environmental constraints on aerodrome operations. (ICAO Circular 303 — Operational opportunities to minimise fuel use and reduce emissions)
TWR/APP PEN 3.1.2	Explain the use of Collaborative Environmental Management (CEM) process at aerodromes.
TWR PEN 3.1.3	Appreciate the mitigation techniques used at aerodromes to minimise aviation's impact on the environment
APP PEN 4.1.3	Appreciate the mitigation techniques used to minimise aviation's impact on the environment

SUBJECT 10: ABNORMAL AND EMERGENCY SITUATIONS

The subject objective is: Learners shall develop a professional attitude to manage traffic in abnormal and emergency situations

TOPIC ABES 1 — ABNORMAL AND EMERGENCY SITUATIONS (ABES)

Subtopic ABES 1.1 — Overview of ABES	
TWR/APP ABES 1.1.1	List common abnormal and emergency situations.
TWR/APP ABES 1.1.2	Identify potential or actual abnormal and emergency situations.
TWR/ APP ABES 1.1.3	Take into account the procedures for given abnormal and emergency situations.
TWR/APP ABES 1.1.4	Take into account that procedures do not exist for all abnormal and emergency situations.
TWR/APP ABES 1.1.5	Consider how the evolution of a situation may have an impact on safety.

TOPIC ABES 2 — SKILLS IMPROVEMENT	
Subtopic ABES 2.1 — Communication effectiveness	
TWR/APP ABES 2.1.1	Ensure effective communication in all circumstances including the case where standard phraseology is not applicable.
Subtopic ABES 2.2 — Avoidance of mental overload	
TWR/APP ABES 2.2.1	Describe actions to keep the situation under control.
TWR/APP ABES 2.2.2	Organise priority of actions.
TWR/APP ABES 2.2.3	Ensure effective dissemination of information.
TWR /APP ABES 2.2.4	Consider asking for help.
Subtopic ABES 2.3 — Air–ground cooperation	
TWR /APP ABES 2.3.1	Collect appropriate information relevant to the situation.
TWR/ APP ABES 2.3.2	Assist the pilot (Pilot workload).

TOPIC ABES 3 — PROCEDURES FOR ABNORMAL AND EMERGENCY SITUATIONS (ABES)	
Subtopic ABES 3.1 — Application of procedures for ABES	
TWR /APP ABES 3.1.1	Apply the procedures for given abnormal and emergency situations.
Subtopic ABES 3.2 — Radio failure	
TWR/APP ABES 3.2.1	Describe the procedures to be followed by a pilot when that pilot experiences

	complete or partial radio failure (ICAO Doc 4444).
TWR/APP ABES 3.2.2	Apply the procedures to be followed when a pilot experiences complete or partial radio failure.
Subtopic ABES 3.3 — Unlawful interference and aircraft bomb threat	
TWR/APP ABES 3.3.1	Apply ATC procedures associated with unlawful interference and aircraft bomb threat
Subtopic ABES 3.4 — Strayed or unidentified aircraft	
TWR/APP ABES 3.4.1	Apply the procedures in the case of strayed aircraft.
TWR/APP ABES 3.4.2	Apply the procedures in the case of unidentified aircraft.
TWR/APP ABES 3.4.3	Provide navigational assistance to aircraft.
Subtopic ABES 3.5 — Runway incursion	
TWR ABES 3.5.1	Apply ATC procedures associated with runway incursion. (ICAO Doc 4444).
Subtopic ABES 3.5 — Diversions	
APP ABES 3.5.1	Provide navigational assistance to aircraft diverting in emergency.

SUBJECT 11: AERODROMES

The subject objective is: Learners shall recognise and understand the design and layout of aerodromes.

TOPIC AGA 1 — AERODROME DATA, LAYOUT AND COORDINATION	
Subtopic AGA 1.1 — Definitions	
TWR/ APP AGA 1.1.1	Define aerodrome data.
Subtopic AGA 1.2 — Coordination	
TWR/APP AGA 1.2.1	Identify the information that has to be exchanged between Air Traffic Services (ATS) and the aerodrome authority.

TOPIC AGA 2 — MOVEMENT AREA

Subtopic AGA 2.1 — Movement area	
TWR/APP AGA 2.1.1	Describe movement area.
TWR/APP AGA 2.1.2	Describe the marking of obstacles and unusable or unserviceable areas.
TWR/APP AGA 2.1.3	Identify the information on conditions of the movement area that has to be passed on to aircraft.
Subtopic AGA 2.2 — Manoeuvring area	
TWR/APP AGA 2.2.1	Describe manoeuvring area.
TWR/APP AGA 2.2.2	Describe taxiway.
TWR/APP AGA 2.2.3	Describe daylight marking on taxiways.
TWR/APP AGA 2.2.4	Describe taxiway lighting.
Subtopic AGA 2.3 — Runways	
TWR/APP AGA 2.3.1	Describe runway.
TWR/APP AGA 2.3.2	Describe instrument runway.
TWR/APP AGA 2.3.4	Explain the differences between ACN and PCN.
TWR/APP AGA 2.3.6	Describe the daylight markings on runways.
TWR/APP AGA 2.3.7	Describe runway lights.
TWR/APP AGA 2.3.8	Explain the functions of visual landing aids.
TWR/APP AGA 2.3.9	Describe the approach lighting systems.
TWR/APP AGA 2.3.10	Characterise the effect of water/ice on runways.
TWR/APP AGA 2.3.11	Explain braking action.
TWR /APP AGA 2.3.12	Explain the effect of runway visual range on aerodrome operation.
Subtopic AGA 3.1 — Obstacle-free airspace around aerodromes	
TWR/APP AGA 3.1.1	Explain the necessity for establishing and maintaining an obstacle-free airspace around aerodromes

TOPIC AGA 4 — MISCELLANEOUS EQUIPMENT	
Subtopic AGA 4.1 — Location	
TWR /APP AGA 4.1.1	Explain the location of different aerodrome ground equipment.

APPENDIX 3 RATING TRAINING APS

The ATCO Rating training Approach Control Surveillance Rating (APS) should contain the following subject objectives and training objectives.

SUBJECT 1: INTRODUCTION TO THE COURSE

The subject objective is: Learners shall know and understand the training programme that they will follow and learn how to obtain the appropriate information.

TOPIC INTR 1 — COURSE MANAGEMENT	
Subtopic INTR 1.1 — Course introduction	
APS INTR 1.1.1	Explain the aims and main objectives of the course.
Subtopic INTR 1.2 — Course administration	
APS INTR 1.2.1	State how the course is administered
Subtopic INTR 1.3 — Study material and training documentation	
APS INTR 1.3.1	Use appropriate documents and their sources for the course.
APS INTR 1.3.2	Integrate appropriate information into course studies.

TOPIC INTR 2 — INTRODUCTION TO THE ATC TRAINING COURSE	
Subtopic INTR 2.1 — Course content and organisation	
APS INTR 2.1.1	State the different training methods used during the course.
APS INTR 2.1.2	State the subjects covered by the course and their purpose
APS INTR 2.1.3	Describe the organisation of theoretical training.
APS INTR 2.1.4	Describe the organisation of practical training.
Subtopic INTR 2.2 — Training ethos	
APS INTR 2.2.1	Recognise the feedback mechanisms available.
Subtopic INTR 2.3 — Assessment process	
APS INTRB 2.3.1	Describe the assessment process.

SUBJECT 2: AVIATION LAW

The subject objective is: Learners shall know, understand and apply the Rules of the Air regarding reporting and airspace, and appreciate the Licensing and Competence principles .

TOPIC LAW 1 — RULES AND REGULATIONS	
Subtopic LAW 1.1 — Airspace	
APS LAW 1.1.1	Appreciate airspace classes and structure and their relevance to operations using the Approach Control Surveillance rating.

SUBJECT 3: AIR TRAFFIC MANAGEMENT

The subject objective is: Learners shall manage air traffic to ensure safe, orderly and expeditious services..

TOPIC ATM 1 — PROVISION OF SERVICES	
Subtopic ATM 1.1 — Aerodrome control service	
APS ATM 1.1.1	Appreciate areas of responsibility
APS ATM 1.1.2	Provide approach control service (ICAO Annex 11, ICAO Doc 7030, ICAO Doc 4444, operation manuals).
Subtopic ATM 1.2 — Flight information service (FIS)	
APS ATM 1.2.1	Use an ATS surveillance system in the provision of FIS (CAO Doc 4444, Information to identified aircraft concerning: traffic, Navigation)
APS ATM 1.2.2	Issue appropriate information concerning the position of conflicting traffic (ICAO Doc 4444)
APS ATM 1.2.3	Issue appropriate information.
APS ATM 1.2.4	Appreciate the use of ATIS in the provision of flight information service.
Subtopic ATM 1.3 — Alerting service (ALRS)	
APS ATM 1.3.1	Provide ALRS (ICAO Doc 4444).

APS ATM 1.3.2	Respond to distress and urgency messages and signals. (ICAO Annex 10, ICAO Doc 4444)
APS ATM 1.3.3	Use an ATS surveillance system in the provision of ALRS.
Subtopic ATM 1.4 — ATS system capacity and air traffic flow management	
APS ATM 1.4.1	Appreciate the impact of ATS system capacity and air traffic flow management on the controller.
APS ATM 1.4.2	Apply flow management procedures in the provision of ATC.
APS ATM 1.4.3	Organise traffic flows and patterns to take account of airspace boundaries.
APS ATM 1.4.4	Organise traffic flows and patterns to take account of areas of responsibility
APS ATM 1.4.5	Inform supervisor of local factors affecting ATS system capacity and air traffic flow management.
APS ATM 1.4.6	Organise traffic flows and patterns to take account of ATS surveillance system capability

TOPIC ATM 2 — COMMUNICATION	
Subtopic ATM 2.1 — Effective communication	
APS ATM 2.1.1	Use approved phraseology.
APS ATM 2.1.2	Ensure effective communication.

TOPIC ATM 3 — ATC CLEARANCES AND ATC INSTRUCTIONS	
Subtopic ATM 3.1 — ATC clearances	
APS ATM 3.1.1	Issue appropriate ATC clearances (ICAO Doc 4444).
APS ATM 3.1.2	Integrate appropriate ATC clearances in control service.
APS ATM 3.1.3	Ensure the agreed course of action is carried out.
Subtopic ATM 3.2 — ATC instructions	
APS ATM 3.2.1	Issue appropriate ATC instructions (ICAO Doc 4444).

APS ATM 3.2.2	Integrate appropriate ATC instructions in control service
APS ATM 3.2.3	Ensure the agreed course of action is carried out.

TOPIC ATM 4 — COORDINATION	
Subtopic ATM 4.1 — Necessity for coordination	
APS ATM 4.1.1	Identify the need for coordination.
Subtopic ATM 4.2 — Tools and methods for coordination	
APS ATM 4.1.1	Use the available tools for coordination.
Subtopic ATM 4.3 — Coordination procedures	
APS ATM 4.3.1	Initiate appropriate coordination.
APS ATM 4.3.2	Analyse effect of coordination requested by an adjacent position/unit.
APS ATM 4.3.3	Select, after negotiation, an appropriate course of action.
APS ATM 4.3.4	Ensure the agreed course of action is carried out.
APS ATM 4.3.5	Coordinate when providing FIS (ICAO Doc 4444).
APS ATM 4.3.6	Coordinate when providing ALRS (ICAO Doc 4444).

TOPIC ATM 5 — ALTIMETRY AND LEVEL ALLOCATION	
Subtopic ATM 5.1 — Altimetry	
APS ATM 5.1.1	Allocate levels according to altimetry data.
APS ATM 5.1.2	Ensure separation according to altimetry data.
Subtopic ATM 5.2 — Terrain clearance	
APS ATM 5.2.1	Provide planning, coordination and control actions appropriate to the rules for minimum safe height and terrain clearance.

TOPIC ATM 6 — SEPARATIONS
Subtopic ATM 6.1 — Vertical separation

APS ATM 6.1.1	Provide standard vertical separation. (ICAO Doc 4444)
APS ATM 6.1.2	Provide increased vertical separation. (ICAO Doc 4444)
APS ATM 6.1.3	Appreciate the application of emergency vertical separation. (ICAO Doc 4444, ICAO Doc 7030)
APS ATM 6.1.4	Provide vertical separation in a surveillance environment.
Subtopic ATM 6.2 — Longitudinal separation in a surveillance environment	
APS ATM 6.2.1	Provide longitudinal separation in a surveillance environment (Successive departures, successive arrivals, overflights, speed control, silent transfer, ICAO Doc 4444).
Subtopic ATM 6.3 — Delegation of separation	
APS ATM 6.3.1	Delegate separation to pilots in the case of aircraft executing successive visual approaches.
APS ATM 6.3.2	Appreciate the conditions which must be met when delegating separation to pilots to fly maintaining own separation while in VMC.
Subtopic ATM 6.4 — Wake turbulence distance-based separation	
APS ATM 6.4.1	Provide distance-based wake turbulence separation (ICAO Doc 4444).
Subtopic ATM 6.5 — Separation based on ATS surveillance systems	
APS ATM 6.5.1	Describe how separation based on ATS surveillance systems is applied (ICAO Doc 4444).
APS ATM 6.5.2	Provide horizontal separation (CAO Doc 4444, ICAO Doc 7030, local operation manuals, holding).
APS ATM 6.5.3	Provide horizontal separation by vectoring in a variety of situations.
APS ATM 6.5.4	Ensure horizontal or vertical separation from airspace boundaries.

TOPIC ATM 7 — AIRBORNE COLLISION AVOIDANCE SYSTEMS AND GROUND-BASED SAFETY NETS
Subtopic ATM 7.1 — Airborne collision avoidance systems

APS ATM 7.1.1	Differentiate between ACAS advisory thresholds and separation standards applicable in the approach control environment. (ICAO Doc 9863).
APS ATM 7.1.2	Describe the controller responsibility during and following an ACAS RA reported by pilot (ICAO Doc 4444).
APS ATM 7.1.3	Respond to pilot notification of actions based on airborne systems warnings
Subtopic ATM 7.2 — Ground-based safety nets	
APS ATM 7.2.1	Describe the controller responsibility during and following safety net warnings (ICAO Doc 4444).
APS ATM 7.2.2	Respond to ground-based safety net warnings.

TOPIC ATM 8 — DATA DISPLAY	
Subtopic ATM 8.1 — Data management	
APS ATM 8.1.1	Update the data display to accurately reflect the traffic situation.
APS ATM 8.1.2	Analyse pertinent data on data displays.
APS ATM 8.1.3	Organise pertinent data on data displays.
APS ATM 8.1.4	Obtain flight plan information.
APS ATM 8.1.5	Use flight plan information.

TOPIC ATM 9 — OPERATIONAL ENVIRONMENT (SIMULATED)	
Subtopic ATM 9.1 — Integrity of the operational environment	
APS ATM 9.1.1	Obtain information concerning the operational environment.
APS ATM 9.1.2	Ensure the integrity of the operational environment.
Subtopic ATM 9.2 — Verification of the currency of operational procedures	
APS ATM 9.2.1	Check all relevant documentation before managing traffic.
APS ATM 9.2.2	Manage traffic in accordance with a change to operational procedures.
Subtopic ATM 9.3 — Handover–takeover	

APS ATM 9.3.1	Transfer information to the relieving controller.
APS ATM 9.3.2	Obtain information from the controller handing over.

TOPIC ATM 10 APP— PROVISION OF CONTROL SERVICE	
Subtopic ATM 10.1 — Responsibility and processing of information	
APS ATM 10.1.1	Describe the division of responsibility among air traffic control units.
APS ATM 10.1.2	Describe the responsibility in regard to military traffic (ICAO Doc 4444).
APS ATM 10.1.3	Obtain operational information (ICAO Doc 4444, local operation manuals).
APS ATM 10.1.4	Interpret operational information
APS ATM 10.1.5	Organise forwarding of operational information.
APS ATM 10.1.6	Integrate operational information into control decisions.
APS ATM 10.1.7	Appreciate the influence of operational requirements.
Subtopic ATM 10.2 — ATS surveillance service	
APS ATM 10.2.1	Explain the responsibility for the provision of ATS surveillance service appropriate to APS rating (ICAO Doc 4444, ICAO Annex 11, local operation manuals).
APS ATM 10.2.2	Explain the functions that may be performed with the use of ATS surveillance system derived information presented on a situation display (ICAO Doc 4444).
APS ATM 10.2.3	Provide planning, coordination and control actions appropriate to VFR, SVFR and IFR traffic in VMC and IMC (ICAO Annex 11, ICAO Doc 4444).
APS ATM 10.2.4	Apply the procedures for termination of ATS surveillance service (ICAO Doc 4444).
Subtopic ATM 10.3 — Traffic management process	
APS ATM 10.3.1	Ensure that situational awareness is maintained.
APS ATM 10.3.2	Detect conflicts in time for appropriate resolution.
APS ATM 10.3.3	Identify potential solutions to achieve a safe and effective traffic flow.
APS ATM 10.3.4	Evaluate possible outcomes of different planning and control actions.

APS ATM 10.3.5	Select an appropriate plan in time to achieve safe and effective traffic flow.
APS ATM 10.3.6	Ensure an adequate priority of actions.
APS ATM 10.3.7	Execute selected plan in a timely manner.
APS ATM 10.3.8	Ensure a safe and efficient outcome is achieved.
Subtopic ATM 10.4 — Handling traffic	
APS ATM 10.4.1	Manage arrivals and departures.
APS ATM 10.4.2	Balance the workload against personal capacity.
APS ATM 10.4.3	Define flight path monitoring and vectoring. (ICAO Doc 4444)
APS ATM 10.4.4	Explain the requirements for vectoring and termination of vectoring. (ICAO Doc 4444)
APS ATM 10.4.5	Provide vectoring. (ICAO Doc 4444)
APS ATM 10.4.6	Apply the procedures for termination of vectoring. (ICAO Doc 4444)
APS ATM 10.4.7	Manage traffic on different types of approaches.
APS ATM 10.4.8	Integrate aircraft on missed approach into the traffic situation.
Subtopic ATM 10.5 — Control service with advanced system support	
APS ATM 10.5.1	Appreciate the impact of advanced systems on the provision of approach control service.

TOPIC ATM 11 — HOLDING	
Subtopic ATM 11.1 — General holding procedures	
APS ATM 11.1.1	Apply holding procedures. (ICAO Doc 4444)
APS ATM 11.1.2	Appreciate the factors affecting holding patterns.
Subtopic ATM 11.2 — Approaching aircraft	
APS ATM 11.2.1	Issue Expected Approach Times (EATs).
APS ATM 11.2.2	Organise the traffic landing sequence in a holding pattern.

Subtopic ATM 11.3 — Holding in a surveillance environment	
APS ATM 11.3.1	Organise traffic to separate other aircraft from holding aircraft.
APS ATM 11.3.2	Integrate system support, when available.

TOPIC ATM 12 — IDENTIFICATION	
Subtopic ATM 12.1 — Establishment of identification	
APS ATM 12.1.1	Appreciate the precautions when establishing identification.
APS ATM 12.1.2	Identify aircraft.
APS ATM 12.1.3	Apply the procedures in the case of misidentification.
Subtopic ATM 12.2 — Maintenance of identification	
APS ATM 12.2.1	Appreciate the necessity to maintain identification.
Subtopic ATM 12.3 — Loss of identity	
APS ATM 12.3.1	Appreciate when an aircraft identification is lost or in doubt.
APS ATM 12.3.2	Apply methods to re-establish identification.
APS ATM 12.3.3	Respond to loss/doubt concerning identification.
Subtopic ATM 12.4 — Position information	
APS ATM 12.4.1	Appreciate the circumstances when position information should be passed on to aircraft.
APS ATM 12.4.2	State the format in which position information can be passed on to aircraft (ICAO Doc 4444).
Subtopic ATM 12.5 — Transfer of identity	
APS ATM 12.5.1	Apply the methods of transfer of identification
APS ATM 12.5.2	Appreciate the precautions when transferring identification.

SUBJECT 4: NAVIGATION

The subject objective is: Learners shall analyse all navigational aspects in order to organise the traffic

TOPIC NAV 2 — INSTRUMENT NAVIGATION	
Subtopic NAV 2.1 — Navigational systems	
APS NAV 2.1.1	Manage traffic in case of change in the operational status of navigational systems.
APS NAV 2.1.2	Appreciate the effect of a change in the operational status of navigational systems
Subtopic NAV 2.2 — Stabilised approach	
APS NAV 2.2.2	Appreciate the effect of late change of runway-in-use or type of approach for landing aircraft.
APS NAV 2.2.3	Appreciate controller actions that may contribute to unstabilised approach.
Subtopic NAV 2.3 — Instrument departures and arrivals	
APS NAV 2.3.1	Describe relevant SIDs and STARs
APS NAV 2.3.2	Describe the types and phases of an instrument approach procedure.
APS NAV 2.3.4	Evaluate the necessary information to be provided to pilots in need of navigational assistance.
Subtopic NAV 2.4 — Satellite-based systems	
ASP NAV 2.5.1	State the different applications of satellite-based systems relevant for approach operations
Subtopic NAV 2.6 — PBN applications	
APS NAV 2.6.1	State the navigation applications used in approach and terminal environments.
APS NAV 2.6.2	Explain the principles and designation of navigation specifications in use.

SUBJECT 5: AIRCRAFT

The subject objective is: Learners shall assess and integrate aircraft performance in the provision of ATS.

TOPIC ACFT 1 — AIRCRAFT INSTRUMENTS	
Subtopic ACFT 1.1 — Aircraft instruments	
APS ACFT 1.1.1	Explain the operation of on-board surveillance equipment

TOPIC ACFT 2 — AIRCRAFT CATEGORIES	
Subtopic ACFT 2.1 — Wake turbulence	
APS ACFT 2.1.1	Explain the wake turbulence effect and associated hazards to succeeding aircraft.
APS ACFT 2.1.2	Appreciate the techniques used to prevent hazards associated with wake turbulence to succeeding aircraft.
Subtopic ACFT 2.2 — Application of ICAO approach categories	
APS ACFT 2.2.1	Describe the use of ICAO approach categories (ICAO Doc 8168).
APS ACFT 2.2.2	Appreciate the effect of ICAO approach categories on the organisation of traffic.

TOPIC ACFT 3 — FACTORS AFFECTING AIRCRAFT PERFORMANCE	
Subtopic ACFT 3.1 — Climb factors	
APS ACFT 3.1.1	Appreciate the influence of factors affecting aircraft during climb.
APS ACFT 3.1.2	Describe the influence of factors affecting departing aircraft
Subtopic ACFT 3.2 — Cruise factors	
APS ACFT 3.2.1	Integrate the influence of factors affecting aircraft during cruise.
Subtopic ACFT 3.3 — Descent and initial approach factors	
APS ACFT 3.3.1	Integrate the influence of factors affecting aircraft during descent.
Subtopic ACFT 3.6 — Final approach and landing factors	
APS ACFT 3.6.1	Integrate the influence of factors affecting aircraft during final approach and landing.

SUBJECT 6: EQUIPMENT AND SYSTEMS

The subject objective is:	Learners shall integrate knowledge and understanding of the basic working principles of equipment and systems, and comply with the equipment and system degradation procedures in the provision of ATS.

TOPIC EQPS 1 — CONTROLLER WORKING POSITION	
Subtopic EQPS 1.1 — Operation and monitoring of equipment	
APS EQPS 1.1.1	Monitor the technical integrity of the controller working position.
APS EQPS 1.1.2	Operate the equipment of the controller working position.
APS EQPS 1.1.3	Operate available equipment in abnormal and emergency situations.
Subtopic EQPS 1.2 — Situation displays and information systems	
APS EQPS 1.2.1	Use situation displays.
APS EQPS 1.2.2	Check availability of information.
APS EQPS 1.2.3	Obtain information from equipment.
Subtopic EQPS 1.3 — Flight data systems	
APS EQPS 1.3.1	Use the flight data information at controller working position.
Subtopic EQPS 1.4 — Use of ATS surveillance system	
APS EQPS 1.4.1	Use the ATS surveillance system functions.
APS EQPS 1.4.2	Analyse the information provided by the ATS surveillance system.
APS EQPS 1.4.3	Assign codes.
APS EQPS 1.4.4	Appreciate the use of advanced surveillance technology
Subtopic EQPS 1.5 — Advanced systems	
APS EQPS 1.5.1	Appreciate the use of controller–pilot data link communications when available
APS EQPS 1.5.2	Appreciate the use of information provided by advanced systems.

TOPIC EQPS 2 — EQUIPMENT AND SYSTEMS’ LIMITATIONS AND DEGRADATION
Subtopic EQPS 2.1 — Reaction to limitations

APS EQPS 2.1.1	Take account of the limitations of equipment and systems.
APS EQPS 2.1.2	Respond to technical deficiencies of the operational position.
Subtopic EQPS 2.2 — Communication equipment degradation	
APS EQPS 2.2.1	Identify that communication equipment has degraded.
APS EQPS 2.2.2	Apply contingency procedures in the event of communication equipment degradation.
Subtopic EQPS 2.3 — Navigational equipment degradation	
APS EQPS 2.3.1	Identify when a navigational equipment failure will affect operational ability.
APS EQPS 2.3.2	Apply contingency procedures in the event of a navigational equipment degradation.
Subtopic EQPS 2.4 — Surveillance equipment degradation	
APS EQPS 2.4.1	Identify that surveillance equipment has degraded.
APS EQPS 2.4.2	Apply contingency procedures in the event of surveillance equipment degradation.
Subtopic EQPS 2.5 — ATC processing system degradation	
APS EQPS 2.5.1	Identify a processing system degradation.
APS EQPS 2.5.2	Apply contingency procedures in the event of a processing system degradation.

SUBJECT 7: ABNORMAL AND EMERGENCY SITUATIONS

The subject objective is: Learners shall develop a professional attitude to manage traffic in abnormal and emergency situations

TOPIC ABES 1 — ABNORMAL AND EMERGENCY SITUATIONS (ABES)	
Subtopic ABES 1.1 — Overview of ABES	
APS ABES 1.1.1	List common abnormal and emergency situations.
APS ABES 1.1.2	Identify potential or actual abnormal and emergency situations.

APS ABES 1.1.3	Take into account the procedures for given abnormal and emergency situations.
APS ABES 1.1.4	Take into account that procedures do not exist for all abnormal and emergency situations.
APS ABES 1.1.5	Consider how the evolution of a situation may have an impact on safety.

TOPIC ABES 2 — SKILLS IMPROVEMENT	
Subtopic ABES 2.1 — Communication effectiveness	
APS ABES 2.1.1	Ensure effective communication in all circumstances including the case where standard phraseology is not applicable.
Subtopic ABES 2.2 — Avoidance of mental overload	
APS ABES 2.2.1	Describe actions to keep the situation under control.
APS ABES 2.2.2	Organise priority of actions.
APS ABES 2.2.3	Ensure effective dissemination of information.
APS ABES 2.2.4	Consider asking for help.
Subtopic ABES 2.3 — Air–ground cooperation	
APS ABES 2.3.1	Collect appropriate information relevant to the situation.
APS ABES 2.3.2	Assist the pilot (Pilot workload).

TOPIC ABES 3 — PROCEDURES FOR ABNORMAL AND EMERGENCY SITUATIONS (ABES)	
Subtopic ABES 3.1 — Application of procedures for ABES	
APS ABES 3.1.1	Apply the procedures for given abnormal and emergency situations.
Subtopic ABES 3.2 — Radio failure	
APS ABES 3.2.1	Describe the procedures to be followed by a pilot when that pilot experiences complete or partial radio failure (ICAO Doc 4444).
APS ABES 3.2.2	Apply the procedures to be followed when a pilot experiences complete or partial radio failure.

Subtopic ABES 3.3 — Unlawful interference and aircraft bomb threat	
APS ABES 3.3.1	Apply ATC procedures associated with unlawful interference and aircraft bomb threat
Subtopic ABES 3.4 — Strayed or unidentified aircraft	
APS ABES 3.4.1	Apply the procedures in the case of strayed aircraft.
APS ABES 3.4.2	Apply the procedures in the case of unidentified aircraft.
Subtopic ABES 3.5 — Diversions	
APP ABES 3.5.1	Provide navigational assistance to aircraft diverting in emergency.
Subtopic ABES 3.6 — Transponder failure	
APS ABES 3.6.1	Apply procedures in the event of an SSR transponder failure.

BIJLAGE B

Application for Air Traffic Controllers

Department of Civil Aviation of Aruba

1 EXPLANATION

1.1
Use this form for the application of the (first) issue of an (assistant) air traffic controller's license/validation or revalidation of general/special rating(s) or the re-issue of a license/validation document.

1.2
Please submit the application to the Department of Civil Aviation of Aruba.

1.3
After your application has been correctly submitted,
processing will take approximately 5 working days to complete.

1.4
The provision of air traffic services without a valid license/validation are prohibited in accordance with Article 11 paragraph 3 of the "Luchtvaartverordening" (AB 1989 no GT 58).

1.5
Incomplete or incorrectly completed forms (including not submitting the required documents) will not be processed.

2 APPLICANT DATA

2.1	Last Name	Click here to enter last name
2.2	Given name(s)	Click here to given names
2.3	License number (i.a.)	Click here to enter license number
2.4	Date of birth and place of birth	Click to enter a birth date. Click here to enter place of birth
2.5	Nationality	Click here to enter nationality
2.6	Address	Click p here to address
2.7	Telephone number	Private: Click here to enter phone number Mobile: Click here to enter mobile number
2.8	e-mail address	Click here to enter e-mail adress

3 APPLICATION TYPE

☐ First issue Assistant Air Traffic Controller license and rating(s)

☐ First issue Air Traffic controller license and rating(s)

☐Language proficiency

☐Revalidation of a general/special rating(s)

☐Re-issue of a license document (following loss or theft)

BIJLAGE B

Application for Air Traffic Controllers

Department of Civil Aviation of Aruba

4 GENERAL RATING (s)

	☐ TWR
	☐ APP
	☐ APS

5 SPECIAL RATING(s) & LANGUAGE PROFICIENCY

	☐OJT	☐ASE	☐EXM	**Language proficiency (ELP)**
				☐ Level 4 ☐ Level 5 ☐ Level 6

6 CERTIFICATES/DOCUMENTS

In order to assess your application, the Department of Civil Aviation Aruba requires you to attach the following documents (if relevant) to the application form. Select the documents that accompany your application.

6.1	Issue of an assistant Air Traffic Controller license	☐ Copy of medical certificate ☐ Copy of passport or identity card ☐ Copy of relevant training certificate/documents proving the successful completion of: ☐ Basic training ☐ TWR/APP ☐ Copy of language proficiency certificate ☐ Copy of a positive psychological assessment (not older than twelve months)
6.2	Issue of an Air Traffic Controller license	☐ Copy of medical certificate ☐ Original Assistant- Air Traffic Controller license ☐ Copy of relevant training certificate/documents proving the successful completion of: ☐ Basic training ☐ Rating training TWR/ APP ☐ Rating training APS ☐ Copy of language proficiency certificate ☐ Copy of a positive psychological assessment (not older than five years)
6.3	The issue or revalidation of a language proficiency ELP	☐ Copy of language proficiency certificate
6.4	Revalidation of a general rating	☐ Original Air Traffic Controller License ☐ Copy of medical certificate ☐ Copy of the competence assessment form of the ANSP for the ratings in question ☐ Copy of a positive psychological assessment (not older than five years)

Application for Air Traffic Controllers

Department of Civil Aviation of Aruba

6.5	Issue or revalidation of the special rating OJT	☐ Original Air Traffic Controller License ☐ document proving the successful completion of the training for practical instructional skills /Copy of refresher training certificate (no older than one year) ☐ copy assessment for practical instructor by the Department of Civil Aviation Aruba (only for first issue)
6.6	Issue of revalidation of the Special rating ASE	☐ Original Air Traffic Controller License ☐ document proving the successful completion of the assessor course /Copy of refresher training certificate (no older than one year) ☐ copy of assessment for assessor by the Department of Civil Aviation (only for first issue)
6.7	Issue or revalidation of the Special rating AXE	☐ Original Air Traffic Controller License ☐ Document proving the successful completion of the assessor course /Copy of refresher training certificate ☐ Copy of assessment for assessor by the Department of Civil Aviation (only for first issue)

7 DECLARATION and SIGNATURE

7.1	Declaration applicant	I hereby: 1. apply for the issue -revalidation of (Assistant) ATCO license, and/or general of special ratings as indicated; 2. confirm that the information contained herein is correct at the time of the application; 3. confirm that I am aware that any incorrect information in or accompanying the application form can result in rejection of the application. 4. Confirm that I am aware that it is legally prohibited to provide of air traffic services without a valid license/validation.
7.2	Date	Click or tap to enter a date.
7.3	Applicant's signature	
7.4	Name of contact person of ANSP	Click here to insert ANSP contact person, I hereby confirm that I am aware that it is legally prohibited to provide of air traffic services without a valid license/validation and that I will not schedule an Air Traffic Controller to work without a valid License/validation and Medical Certificate.
7.5	Contact person's signature and stamp of the ANSP	

BIJLAGE C

<u>Buitenkant Bewijs van bevoegdheid:</u>

XII. Ratings

TWR/APP/APS
OJT/ASE/EXM

XIII. Remarks: ICAO ELP LEVEL
Expiry date:

XIV. Other details:
E.g. VDL: Holder shall wear corrective lenses and carry a spare set of spectacles.

KINGDOM OF THE NETHELANDS

A R U B A

Name ministry in charge of aviation affairs

DEPARTMENT OF CIVIL AVIATION

PERSONNEL LICENCE

ISSUED IN ACCORDANCE WITH THE STANDARDS OF ICAO

<u>Binnenkant Bewijs van bevoegdheid:</u>

II. **AIR TRAFFIC CONTROLLER**

III. No.: Date of first issue:

IV. Surname:

Given names:

V. Address:

VI. Nationality:

Place of Birth:

Date of Birth:

VII. Signature of holder:

VIII. Conditions under which this Licence is issued:
HOLDER MAY ONLY EXERCISE THE PRIVILEGES OF THIS CERTIFICATE IF IT IS ACCOMPANIED BY A VALID MEDICAL CERTIFICATE

IX. Period of validity:

From	To	Signature

X. Aruba,

X. For the Minister,

BIJLAGE D

Vanwaardeverklaring Lucthverkeersleiders

VALIDATION

II. TYPE OF CERT. DATE OF FIRST ISSUE:

VALIDATION RESTRICTED TO:

III. CERT. NO:

IV. SURNAME: GIVEN NAMES:

VIII. VALIDATION ISSUED ON BASIS OF:

XII. RATINGS:

XIII. PRIVILIEGES/RESTRICTIONS/LIMITATIONS/REMARKS:

a) The holder of this validation is permitted the privileges of the licence mentioned under VIII provided this remains current, meeting all ICAO requirements.

b) The licence mentioned under VIII and medical certificate will be carried with this validation at all times.

XI. EXPIRY DATE: XI. FOR THE MINISTER,

X. DATE IF ISSUE:

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